



"Enabling Future through Resilience, Social Stability and Ecological Sustenance"

**2ND INTERNATIONAL CONFERENCE ON
SOCIAL SCIENCES AND LANGUAGES**

ICSSL 2024

18TH AND 19TH DECEMBER 2024

Conference Proceedings
Extended Abstracts



**FACULTY OF SOCIAL SCIENCES AND LANGUAGES
SABARAGAMUWA UNIVERSITY OF SRI LANKA**



**2ND INTERNATIONAL CONFERENCE ON SOCIAL
SCIENCES AND LANGUAGES
(ICSSL - 2024)**

*Enabling Future through Resilience, Social Stability, and Ecological
Sustenance*



December 18th and 19th

**FACULTY OF SOCIAL SCIENCES AND
LANGUAGES SABARAGAMUWA UNIVERSITY OF
SRI LANKA**

**Conference Proceedings
Extended Abstracts**

ICSSL-2024

Published by Sabaragamuwa University of Sri Lanka

Copyright ©2024 Sabaragamuwa University of Sri Lanka

Reproduction of this publication for educational or other non-commercial purposes is authorised without prior written permission from the copyright holder, provided the source is fully acknowledged.

Reproduction of this publication for resale or other commercial purposes is prohibited without prior written permission of the copyright holder.

Responsibilities for the contents of the abstracts included in this publication remain with the respective authors.

ISSN 3084-8458

Citation Abstracts of the 2nd International Conference on Social Sciences and Languages, Sabaragamuwa University of Sri Lanka

Available From Sabaragamuwa University of Sri Lanka
P.O. Box 02, Belihuloya 70140, Sri Lanka
Tel: +94 (0)45 2280014
Email: icssl@sab.ac.lk
Web: <https://www.sab.ac.lk/icssl/>

Cover Page Design V.P.G. Priyankara

Type Settings and Formatting Ms. M.G.S.K. Gamage
Ms. A.D. Nihinsa Dissanayake

ORGANISING COMMITTEE

CONFERENCE CHAIR

Prof. W.M.J. Welgama

CONFERENCE CO-CHAIR

Prof. W.M. Ariyaratne

Dr. U.S. Thathsarani

CONFERENCE SECRETARY

Dr. D.A.N.S.Y. Dassanayake

CONFERENCE CO-SECRETARIES

Ms. U.B.A.H.N. Perera

Mrs. J.A.M. Hansani

ADVISORY PANEL

Prof. M. Sunil Shantha	Vice Chancellor, Sabaragamuwa University of Sri Lanka
Dr. K.R.W.K.H Abeywickrama	Dean, Faculty of Social Sciences and Languages
Prof. A. Sarath Ananda	Department of Social Sciences
Prof. H.M.S. Priyanath	Department of Economics and Statistics
Prof. A. Aruna Shantha	Department of Economics and Statistics
Prof. K.V.D. Edirisooriya	Department of Geography and Environmental Management
Prof. K.P.L. Nishantha Patabandi	Department of Geography and Environmental Management
Prof. W.M. Ariyaratne	Department of Languages
Prof. R.G.S. Ratnayake	Department of Languages
Prof. R.J.M. Uduporuwa	Department of Geography and Environmental Management
Prof. G.R.S.R.C.S Samaraweera	Department of Economics and Statistics
Prof. S.K Handaragama	Department of Social Sciences
Assoc. Prof. S.J.M.N.G Samarakoon	Department of Economics and Statistics

EDITORIAL BOARD

EDITOR - IN – CHIEF

Prof. W.M.J. Welgama

Prof. W.M. Ariyaratne

EDITORS

Prof. H.M.S. Priyanath

Prof. G.R.S.R.C. Samaraweera

Dr. U.P. Lekamge

Dr. U.S. Thathsarani

Dr. H.U.S. Pradeep

Ms. J.A.M. Hansani

Ms. U.B.A.H.N. Perera

EDITORIAL ASSISTANTS

V.P.G. Priyankara

Ms. I. M. Ratnayake

Ms. K.T. Dananjali

Ms. M.G.S.K. Gamage

Ms. A.D. Nihinsa Dissanayake

Ms. H.M. Navodya Heshani

Mr. A.S.D. Gomas

SPECIAL COMMITTEES

INTERNATIONAL RELATIONS

Chair	Dr. N.S.D. Paranavitana
Co-chair	Dr. D.A.N.S.Y. Dassanayake

TECHNICAL PROGRAMME

Chair	Dr. H.U.S. Pradeep
Co-chair	Dr. G.C.L. Pathirana

EDITORIAL AND PUBLICATION

Chair	Dr. U.P. Lekamge
Co-chair	Ms. Sayuri Gamage

DESIGN AND PUBLICITY

Chair	Mrs. W.M. Sewwandi
Co-chair	Mr. V.P.G. Priyankara

WORKSHOP

Chair	Prof K.P.L. Nishantha
Co-Chair	Mrs. E.M.T.K. Senevirathna

FINANCE

Chair	Prof. R.J.M. Uduporuwa
Co-Chair	Ms. P.D.M. Muthumali

ONLINE RESOURCE MANAGEMENT

Chair Mr. R.M.N.B. Rathnayake

Co-Chair Ms. K.T. Dananjali

REGISTRATION

Chair Mrs. R.A.R.P. Maduwanthi

Co-Chair Ms. J.E. Mohotti

WEB AND INFORMATION MANAGEMENT

Chair Dr. R.A.H.M. Rupasingha

Co-Chair Ms. J.D.U. Indumini

LOGISTICS & INAUGURATION

Chair Mr. Brazil Nagodawithana

Logistic Co-Chair Mrs. A.D. Weerakkody

Inauguration Co-Chair Mrs. K.B.P.C.A. Wijerathne

TECHNICAL PROGRAMME COMMITTEE

TECHNICAL PROGRAMME

Track Chair Dr. H.U.S. Pradeep

Track Co-Chair Dr. G.C.L. Pathirana

ECONOMICS AND MANAGEMENT FOR DEVELOPMENT

Track Chair Dr. A.M.I. Gunarathna

Track Co-Chair Mrs. N.M. Wijesekara

STATISTICS AND INFORMATION TECHNOLOGY

Track Chair Dr. U.S. Thathsarani

Track Co-Chair Dr. R.A.H.M. Rupasingha

GEOGRAPHY AND ENVIRONMENTAL MANAGEMENT

Track Chair Prof. K.V.D. Edirisooriya Manike

Track Co-Chair Mrs. E.M.T.K. Senevirathna

SOCIETY, POLITICS AND MEDIA STUDIES

Track Chair Prof. A. Sarath Ananda

Track Co-Chair Dr. G.C.L. Pathirana

LANGUAGE, LINGUISTICS, LITERATURE AND CULTURE

Track Chair Dr. N.S.D. Paranavitana

Track Co-Chair Ms. S.P.S.P. Weerasinghe

Ms. A.D. Maxworth

**ENGLISH LANGUAGE TEACHING AND INNOVATIVE
EDUCATION PRACTICES**

Track Chair

Ms. N.A.L.D.R. Silva

Track Co-Chair

Ms. J.D.U.M. Jayasinghe

BOARD OF LANGUAGE EDITORS

Chair Dr. U.P. Lekamge

Co-chair Ms. H.E. Wijayawantha

MEMBERS

Dr. J.K.C. Dissanayake

Dr. B.M.L.R.K. Basnayake

Ms. S.P.S.P. Weerasinghe

Ms. N.A.L.D.R. Silva

Ms. A.D. Maxworth

Ms. U.B.A.H.N. Perera

Ms. J.A.M. Hansani

Ms. J.D.U.M. Jayasinghe

Ms. I.M. Ratnayake

Ms. M. Hosshanthika

Ms. Y.G.C.H. Bandara

Ms. D.P.G.T.D. Jayasinghe

PANEL OF REVIEWERS

TRACK 01	
ECONOMICS AND MANAGEMENT FOR DEVELOPMENT	
Prof. H.M.S. Priyanath	Department of Economics and Statistics, Sabaragamuwa University of Sri Lanka
Prof. A. Aruna Shanthaarachchi	Department of Economics and Statistics, Sabaragamuwa University of Sri Lanka
Prof. G.R.S.R.C. Samaraweera	Department of Economics and Statistics, Sabaragamuwa University of Sri Lanka
Assoc. Prof. S.J.M.N.G. Samarakoon	Department of Economics and Statistics, Sabaragamuwa University of Sri Lanka
Mrs. M.D.J.W. Wijesinghe	Department of Economics and Statistics, Sabaragamuwa University of Sri Lanka

TRACK 02	
STATISTICS AND INFORMATION TECHNOLOGY	
Prof. B.T.G.S. Kumara	Department of Data Science, Sabaragamuwa University of Sri Lanka
Dr. R.M.L. Rathnayake	Department of Economics and Statistics, Sabaragamuwa University of Sri Lanka
Dr. U.A.P. Ishanka	Department of Data Science, Sabaragamuwa University of Sri Lanka
Dr. Chamil W. Senarathne	Department of Accounting and Finance, Open University of Sri Lanka
Mrs. D.J. Jagoda	Department of Economics and Statistics, Sabaragamuwa University of Sri Lanka
Mrs. L.P. Himali	Department of Economics and Statistics, Sabaragamuwa University of Sri Lanka
Mr. Wiraj Wikramaarachchi	Department of Information and Communication Technology, Rajarata University of Sri Lanka

Ms. Chathurika Koswatte	Sri Lanka Institute of Information Technology, Kandy Center
Mr. Udaka Ayas	University of Aizu, Japan

TRACK 03
GEOGRAPHY AND ENVIRONMENTAL MANAGEMENT

Prof. K.R. Koswattage	Department of Engineering Technology, Sabaragamuwa University of Sri Lanka
Prof. J.M.C.K. Jayawardana	Department of Natural Resources, Sabaragamuwa University of Sri Lanka
Prof. Deepani Edirisooriya	Department of Geography and Environmental Management, Sabaragamuwa University of Sri Lanka
Prof. R.J.M. Uduporuwa	Department of Geography and Environmental Management, Sabaragamuwa University of Sri Lanka
Prof. K.P.L. Nishantha	Department of Geography and Environmental Management, Sabaragamuwa University of Sri Lanka
Prof. R.M.K.G.S.P.B. Koswatte	Department of Remote Sensing & GIS, Sabaragamuwa University of Sri Lanka
Prof. Tilak Hewawasam	Department of Geography and Environmental Management, University of Peradeniya
Prof. E.H.G.C Pathmasiri	Department of Geography, University of Ruhuna
Prof. M.S.M. Aslam	Department of Tourism Management, Sabaragamuwa University of Sri Lanka
Prof. R.M.K. Ratnayake	Department of Geography, University of Sri Jayewardenepura
Prof. G.D. Kapila Kumara	Department of Export Agriculture, Sabaragamuwa University of Sri Lanka
Dr. Lal Gunasekara	Department of Tourism Management, Sabaragamuwa University of Sri Lanka
Dr. Ananda Y. Karunaratne	Department of Geography, University of Colombo

Dr. L.G.D.S Yapa	Department of Geography, University of Ruhuna
Dr. L.V Ranaweera	Department of Natural Resources, Sabaragamuwa University of Sri Lanka
Dr. Saranga Vithanage	Assistant Director, Disaster Management Centre
Dr. R.M.L. Rathnayake	Department of Economics and Statistics, Sabaragamuwa University of Sri Lanka
Mrs. E.M.T.K. Senevirathna	Department of Geography and Environmental Management, Sabaragamuwa University of Sri Lanka
Mrs. Duleepa Jagoda	Department of Economics and Statistics, Sabaragamuwa University of Sri Lanka
Mrs. K.B.P.C.A Wijerathna	Department of Geography and Environmental Management, Sabaragamuwa University of Sri Lanka

TRACK 04
SOCIETY, POLITICS AND MEDIA STUDIES

Prof. A. Sarath Ananda	Department of Social Sciences, Sabaragamuwa University of Sri Lanka
Prof. W.M.J. Welgama	Department of Social Sciences, Sabaragamuwa University of Sri Lanka
Prof. S. Handaragama	Department of Social Sciences, Sabaragamuwa University of Sri Lanka
Prof. N.V.G.A. Hemantha Kumara	Department of Sociology, University of Ruhuna
Dr. U.P. Lekamge	Department of Social Sciences, Sabaragamuwa University of Sri Lanka
Dr. G.D. Silva	Department of Social Sciences, Sabaragamuwa University of Sri Lanka
Dr. G.C.L. Pathirana	Department of Social Sciences, Sabaragamuwa University of Sri Lanka

Dr. H.U.S. Pradeep	Department of Social Sciences, Sabaragamuwa University of Sri Lanka
Dr. H.E.N. Priyadarshani	Department of Political Science, Sri Jayewardenepura University
Dr. N. Pushparajah	Department of Social Sciences, Eastern University Sri Lanka
Dr. R. Ramesh	Department of Political Science, University of Peradeniya
Dr. S. Rajapakshe	Department of Political Science, University of Kelaniya
Dr. M.A.C.G. Wijesundara	Department of Sociology, University of Ruhuna
Dr. H.D.P. Premarathne	Department of Sociology, University of Peradeniya
Mrs. R.P.S.H. Hettiarachchi	Department of Social Sciences, Sabaragamuwa University of Sri Lanka
Mr. Aruna Jayathilaka	Department of Social Sciences, Sabaragamuwa University of Sri Lanka

TRACK 05

LANGUAGE, LINGUISTICS, LITERATURE AND CULTURE

Prof. W.M. Ariyaratne	Department of Languages, Sabaragamuwa University of Sri Lanka.
Prof. V. Maheswaran	Department of Tamil, University of Peradeniya
Prof. Chitra Jayathilake	Department of English and Linguistics, University of Sri Jayewardenepura
Dr. J.K.C. Dissanayake	Department of Languages, Sabaragamuwa University of Sri Lanka.
Dr. H.A.M.A. Hapugoda	Department of Languages, Sabaragamuwa University of Sri Lanka.
Dr. D.A.N.S.Y. Dassanayake	Department of Languages, Sabaragamuwa University of Sri Lanka.

Dr. Nirosha Paranavitana	Department of Languages, Sabaragamuwa University of Sri Lanka.
Dr. Vihanga Perera	Freelancing Researcher
Dr. Tharanga Weerasooriya	Department of English and Linguistics, University of Sri Jayewardenepura
Dr. U.P. Lekamge	Department of Social Sciences, Sabaragamuwa University of Sri Lanka.
Dr. K.S.N. Prasangani	Department of English Language Teaching, Sabaragamuwa University of Sri Lanka
Dr. B.M.L.R.K. Basnayake	Department of English Language Teaching, Sabaragamuwa University of Sri Lanka
Dr. S.K. Kannathas	Department of Translation Studies, University of Jaffna
Dr. Nimali Priyangika	Department of Language Skills Development, Buddhist and Pali University of Sri Lanka
Dr. G.K.C.S. de Silva	Department of Languages, Sabaragamuwa University of Sri Lanka.
Dr. B.D.K. Anandawansa	Department of Languages, General Sir John Kotelawala Defence University (KDU)
Dr. Kanchanakeshi Warnapala	Department of English and Linguistics, University of Sri Jayewardenepura
Dr. K. Shrikarunaakaran	Department of Languages, Eastern University
Dr. Sarasi Kannangara	Department of Modern Languages, University of Kelaniya
Mrs. K.N. Gamage	Department of Linguistics, University of Kelaniya
Mr. Jayamal de Silva	Department of Linguistics, University of Kelaniya
Mrs. Anuradha Jayasinghe	Department of Linguistics, University of Kelaniya

Mrs. Kaumadee Bamunusinghe	Department of Linguistics, University of Kelaniya
Ms. S.R. Devakumare	Department of Languages, Sabaragamuwa University of Sri Lanka.
Mr. Mahinda Pathirana	Department of Languages, Sabaragamuwa University of Sri Lanka.
Mr. Divanka Randula Podduwage	Department of Drama, Cinema and Television, University of Kelaniya
Mr. Anuradha Subasinghe	Department of Drama, Cinema and Television, University of Kelaniya
Ms. S.P.S.P. Weerasinghe	Department of Languages, Sabaragamuwa University of Sri Lanka.
Ms. R.A.R.P. Maduwanthi	Department of Languages, Sabaragamuwa University of Sri Lanka.
Ms. N. Sudarshini	Department of Languages, Sabaragamuwa University of Sri Lanka.

TRACK 06
ENGLISH LANGUAGE TEACHING AND INNOVATIVE
EDUCATION PRACTICES

Prof. K.V. Dhanapala	Department of Languages, Sri Palee Campus University of Colombo
Prof. T.S. Sanjayan	Department of Education, Dr. Dada Vaidya College of Education Affiliated to Goa University, India
Prof. F.T. Gueress	Ibn Tofail University, Morocco
Dr. B.M.L.R.K. Basnayake	Department of English Language Teaching, Sabaragamuwa University of Sri Lanka
Dr. K. S. N. Prasangani	Department of English Language Teaching, Sabaragamuwa University of Sri Lanka
Dr. M. D. N. M. U. Mahawaththa	Department of Marketing Management, Sabaragamuwa University of Sri Lanka

Dr. Sampath Pushpakumara	Department of English Language Teaching, University of Sri Jayewardenepura
Dr. S. G. S. Samaraweera	Department of English Language Teaching, University of Ruhuna
Dr. R. M. Dhanapala	Department of English Language Teaching, Rajarata University of Sri Lanka
Dr. M. I. F. Kareema	Department of English Language Teaching, South Eastern University
Dr. Kamani Samarasinghe	Department of Information Technology, University of the Visual and Performing Arts
Dr. R.M.S.N. Embogama	Department of English Language Teaching, University of the Visual and Performing Arts
Dr. M.K.S.M. Samaranayake	Department of English Language Teaching, Wayamba University of Sri Lanka
Dr. Darshana Samaraweera	Department of English, National Institute of Education
Dr. W.S.A. Fernando	Department of English Language Teaching, Wayamba University of Sri Lanka
Dr. R.M.M. Dhanuka Bandara	Department of English, University of Peradeniya
Mr. M.A.M. Sameem	Department of English Language Teaching, South Eastern University of Sri Lanka
Mr. Nalaka S. Hewage	Department of English Language Teaching, University of Peradeniya

MESSAGE FROM THE VICE CHANCELLOR

Sabaragamuwa University of Sri Lanka

Ladies and gentlemen, distinguished guests,
esteemed academics, and passionate learners,

It is a great pride and honour to address you today at the 2nd International Conference on Social Sciences and Languages. This prestigious gathering embodies the spirit of inquiry, collaboration, and innovation that drives our collective mission to build a better future. The theme of this year's conference - "Enabling the Future through Resilience, Social Stability, and Ecological Sustenance" - could not be more timely or relevant. We live in an era marked by unprecedented challenges, yet, within these challenges lie opportunities to redefine our priorities, reshape our societies, and restore equilibrium through our shared understanding.



The first pillar, resilience, stands for our ability to adapt, recover, and thrive in the face of adversity. In the social sciences, resilience translates into understanding how communities respond to crises—be they natural disasters, economic downturns, or public health emergencies. As educators and researchers, we have a responsibility to equip individuals and societies with the knowledge and skills to navigate these turbulent waters.

The second pillar, social stability, is fundamental to human flourishing. In a world that is increasingly interconnected yet divided by disparities, fostering social stability requires addressing the root causes of inequality, promoting justice, and cultivating empathy. Social sciences and languages play a crucial role in bridging divides - be they cultural, economic, or ideological. Language, in particular, has the power to unite people by enabling dialogue, fostering understanding, and breaking down barriers of prejudice, miscommunication and misunderstanding.

The third pillar, ecological sustenance, reminds us that humanity's future is inseparably linked to the health of our planet. Climate change, biodiversity loss, and unsustainable or irresponsible consumption patterns are urgent issues that demand innovative, inter- and multidisciplinary solutions. The social sciences provide insights into human behaviour and policy frameworks, while languages serve as a medium to communicate these ideas effectively to diverse audiences. Together, they can inspire a global movement for ecological stewardship.

As we strive to achieve sustainability, I urge you to think beyond traditional boundaries. The complexity of our modern challenges demands that we collaborate across disciplines, sectors, and borders. Let us embrace innovative methodologies, critical perspectives, and transformative ideas that will guide us toward a sustainable, equitable, and resilient future.

I would like to take this opportunity to commend the organisers for laying a platform that encourages such meaningful dialogue. One of the remarkable features during the past few years is that the university is ascending in its national rankings. In such a context, your presence here today is a testament to your commitment to making a difference. Through your research, discussions, and shared insights, you contribute to the creation of a world where resilience, stability, and sustainability are not mere ideals but lived realities.

In conclusion, let us remember that the work we do here has the potential to ripple outward, shaping policies, influencing practices, and touching lives. Together, we can enable a future that is not only resilient but also harmonious and sustainable for generations to come.

Thank you, and I wish you all an inspiring and productive conference!

Prof. M. Sunil Shantha

Vice Chancellor

18 December 2024

MESSAGE FROM THE CHAIRMAN

International Conference on Social Sciences and Languages (ICSSL - 2024)



It is an immense honour to welcome you all to the International Conference of Social Sciences and Languages 2025 as the Chairperson. Gathered here are some of the brightest minds and most dedicated professionals in our fields, united by a shared purpose: to explore how we can shape a sustainable and equitable future through the integration of resilience, social stability, and ecological sustenance.

The theme of this year's conference—“Enabling Future through Resilience, Social Stability, and Ecological Sustenance”—is not merely a reflection of the challenges we face today. It is also a call to action, a reminder of the responsibilities we bear as scholars, educators, and advocates. In an era marked by climate crises, rising inequalities, and increasing societal divides, it is critical that we engage deeply with these interconnected issues.

Resilience is the cornerstone of our response to the uncertainties of the modern world. Whether it is communities grappling with economic downturns, nations recovering from the effects of conflict, or ecosystems adapting to the consequences of human activity, resilience allows us not just to survive but to thrive. Through the lens of social sciences, we can better understand how resilience is cultivated, sustained, and scaled.

Social stability, in turn, is the foundation upon which progress and prosperity are built. Stability does not imply stagnation; it signifies balance, fairness, and inclusivity. As we examine the dynamics of language, culture, and human interaction, we uncover how communication fosters understanding and mitigates conflict. Languages, both modern and ancient, serve as bridges between communities, preserving identities while promoting dialogue.

Finally, ecological sustenance underscores the undeniable reality that humanity's future is intricately tied to the health of our planet. The social sciences provide tools to explore the relationships between human behaviour and environmental impact, while linguistic diversity offers insights into indigenous knowledge systems that can inform sustainable practices. Together, they emphasise the need for collaboration across disciplines and regions to address the pressing issues of climate change and environmental

degradation.

Over the next few days, this conference will serve as a platform for the exchange of ideas, the presentation of groundbreaking research, and the initiation of transformative collaborations. I encourage you to embrace the diversity of thought that will unfold in our sessions, workshops, and discussions. This diversity reflects the richness of our collective experience and the strength of our global community.

I also wish to acknowledge the immense effort of the organizing committee, whose dedication has made this event a reality. To our speakers, panellists, and participants, thank you for sharing your knowledge and passion. Your contributions will inspire actions that extend far beyond these walls.

As we embark on this intellectual journey together, let us remain guided by the values embedded in our theme. Resilience, stability, and ecological care are not abstract concepts—they are imperatives that demand our commitment and creativity.

Let us, together, enable a future where societies flourish, the planet thrives, and humanity prospers.

Prof. W.M.J. Welgama
Conference Chair- ICSSL 2024

18 December 2024

MESSAGE FROM THE DEAN

Faculty of Social Sciences and Languages

Sabaragamuwa University of Sri Lanka



It is a great pleasure to issue a message for the Second International Conference on Social Sciences and Languages (ICSSL) 2024, a remarkable platform for fostering academic exchange and interdisciplinary collaboration. The theme, “Enabling the Future through Resilience, Social Stability, and Ecological Sustenance,” appropriately reflects our collective commitment to addressing contemporary challenges through informed research and dialogue.

Resilience is not merely a response to adversity; it is the practical strength that enables societies to thrive amid challenges. It is about cultivating adaptability and fostering mental and emotional strength within individuals and communities. As researchers and educators, our responsibility is to contribute insights and solutions that empower communities to withstand and recover from disruptions, whether they be social, economic, or environmental. Similarly, social stability is the key to maintaining cohesive societies where individuals and groups can co-exist harmoniously. Today, our societies are increasingly diverse, with a spectrum of beliefs, languages, and cultural practices. As scholars in social sciences and languages, our responsibility is to help bridge divides, promote mutual understanding, and cultivate empathy across boundaries. Language, in particular, plays a fundamental role in this endeavour, as it is through communication that we connect, understand, and build trust. Finally, ecological sustenance is a topic that cannot be overstated. The environmental issues we face are global, and they demand immediate attention and action. Our discussions and research at this conference must aim to uncover pathways to sustainable living, reduce environmental harm, and ensure that future generations inherit a planet that can sustain life in all its richness and diversity.

As such, ICSSL 2024 serves as an open forum for academics, researchers, and students at both undergraduate and postgraduate levels, along with industry professionals, to present pioneering research and explore innovative solutions in the domains of social sciences and languages. This convergence of diverse perspectives will undoubtedly contribute to meaningful discussions and transformative ideas for building a sustainable future.

I would like to extend my gratitude to everyone who has contributed to the success of ICSSL 2024. Organising a conference of this scale requires the

dedication and commitment of many individuals. I thank the organising committee, our partners, and everyone involved in bringing this event to life.

Thank you, and I wish you all an inspiring and productive conference.

Dr. Rohan Abeywickrama

Dean

Faculty of Social Sciences & Languages

Sabaragamuwa University of Sri Lanka

18 December 2024

MESSAGE FROM CHIEF GUEST

H.E. Eric Walsh

High Commissioner for Canada in Sri Lanka and Maldives



I would like to extend my sincere gratitude to the organizers for the invitation. You have chosen a great theme for this year's conference: "Enabling future through resilience, social stability and ecological sustenance." There is no better one for Sri Lanka at this time.

The conference promises to be a versatile forum for exploring how social sciences and linguistic research can inform future thinking in academia and policymaking. Canada and Sri Lanka have a long history of development cooperation, and I am pleased that this extends to a partnership with Sabaragamuwa University. This has come through Canada's support to Sri Lanka in its journey to advance language rights.

Canada's Official Languages Act was enacted in 1969, which made English and French equal, official languages in Canada. Similarly, Sri Lanka's Official Language Policy (OLP) has evolved over the years to assure Tamil and Sinhala language rights, and English as a link language. Through Canadian development assistance over the past decades, Canada has supported a series of initiatives sharing our experience in implementing its Official Languages Act.

One such initiative was entitled the National Languages Project (NLP). NLP helped set up the first-ever B.A. degree program in Translation, initiated by the University Grants Commission (UGC) of Sri Lanka in several state universities, including Sabaragamuwa University. After NLP, Canada supported the National Languages Equality Advancement Project (NLEAP) which provided further support for degree programs in translation. These projects allowed for technical exchange missions between Canadian and Sri Lankan academics, including some from the Sabaragamuwa University.

Through these international assistance initiatives, Canada has shared its experience as a bilingual, multi-ethnic and multi-cultural society. We know that language has the power to build societies and allows us to communicate, but can sow division if not carefully managed. This is why ensuring language rights in diverse societies such as Canada and Sri Lanka is so important. Strengthening the systems which advance such rights is vital. With this

continued priority, Canada is now funding a new initiative entitled Pathways to Peace: Building Inclusive Governance and Social Cohesion, which will help implement the language plans developed by public institutions in previous projects. Under Canada's Feminist International Assistance Policy, it will also strengthen the integration of gender equality into language rights.

These efforts align well with Sri Lanka at this juncture. The new Government of Sri Lanka has made a commendable expression of respect for the rights of all citizens regardless of ethnic, religious, or linguistic differences. We are aware that the expectations are high, and we want to do all we can to support a Sri Lankan future of language equality, economic stability, reconciliation among diverse communities, and fulfillment of human rights.

I wish you much success in your discussions under this theme. May they bring out insights from different disciplines in the social sciences and language studies in a way that benefits Sri Lanka. Congratulations on this important milestone.

18 December 2024

TABLE OF CONTENT

ORGANISING COMMITTEE.....	iv
ADVISORY PANEL.....	v
EDITORIAL BOARD.....	vi
SPECIAL COMMITTEES	vii
TECHNICAL PROGRAMME COMMITTEE	ix
BOARD OF LANGUAGE EDITORS.....	xi
PANEL OF REVIEWERS	xii
MESSAGE FROM THE VICE CHANCELLOR.....	xix
MESSAGE FROM THE CHAIRMAN.....	xxi
MESSAGE FROM THE DEAN	xxiii
MESSAGE FROM CHIEF GUEST	xxv
TABLE OF CONTENT	xxvii
THE KEYNOTE SPEECH	35
TRACK 01 ECONOMICS AND MANAGEMENT FOR DEVELOPMENT	42
THE COMPETITIVENESS OF CEYLON TEA IN THE INTERNATIONAL MARKET	43
ECONOMIC EFFECTS OF INTERNATIONAL TOURIST ARRIVALS TO SRI LANKA ACCORDING TO THE TOURISM DESTINATIONS: EVIDENCE FROM 1989-2019.....	49
MOTIVATIONAL DRIVES INFLUENCING BABYMOON TOURISM IN SRI LANKA	55
IMPACT OF MARITAL STATUS ON WOMEN LABOUR FORCE PARTICIPATION: A STUDY BASED ON THE POTUHĀRA AREA.....	60
THE ROLE OF NON-GOVERNMENTAL ORGANISATIONS IN SUPPORTING SMALLHOLDER FARMERS TO ENHANCE FOOD SECURITY DURING ECONOMIC CRISES: A CASE STUDY OF VAVUNIYĀ DISTRICT	66
THE DIFFERENCE IN RELIABILITY AND SOCIO-ECONOMIC BEHAVIOUR ON	

AGRO-MET ADVISORIES OF FARMER COMMUNITIES IN THE DRY ZONE OF SRI LANKA	71
EXPLORATION OF SOCIO-ECONOMIC, CULTURAL, AND PSYCHOLOGICAL INFLUENCES ON FASHION PREFERENCES AMONG YOUNG ADULTS IN SRI LANKA (WITH SPECIAL REFERENCE TO COLOMBO DISTRICT)	80
THE NEXUS BETWEEN DIGITAL FINANCIAL INCLUSION AND FINANCIAL SECTOR DEVELOPMENT IN SRI LANKA	86
TRACK 02 STATISTICS AND INFORMATION TECHNOLOGY	94
PLENARY SPEECH.....	95
ENHANCING USER EXPERIENCE AND MARKETING STRATEGIES ON DARAZ.LK THROUGH AUGMENTED REALITY INTEGRATION AND DATA VISUALISATION.....	100
EXAMINING EFFICIENCY IN TEA ESTATES: CLUSTERING THE ELECTRICITY AND FUEL WOOD CONSUMPTION PATTERNS ALONGSIDE PRODUCTION METRICS.....	106
ASSESSING THE EFFECTIVENESS OF DESIGN AND APPROVAL PROCESS OF STUDENT EVALUATION SYSTEM: A SYSTEMATIC LITERATURE REVIEW	115
SYSTEMATIC REVIEW ON THE EFFECTIVENESS OF SCHEDULING AND EXECUTION IN STUDENT EVALUATION SYSTEMS	125
DOMESTIC PASSENGERS' INTENTION TO USE THE E-TICKETING AND SEAT RESERVATION SYSTEM OF SRI LANKAN RAILWAY	134
AGRI-XPRT: E-GOVERNANCE APPLICATION FOR BULK PRODUCT DISTRIBUTION IN COVID-19 PANDEMIC ERA	140
IDENTIFYING FACTORS INFLUENCING THE PERCEPTION OF PRIVATE UNIVERSITIES IN SRI LANKA (WITH SPECIAL REFERENCE TO KURUNĀGALA DISTRICT).....	149
SOCIAL MEDIA AND ACTIVISM: A NETWORK ANALYSIS OF THE BLACK LIVES MATTER MOVEMENT	155
TRACK 03 GEOGRAPHY AND ENVIRONMENTAL MANAGEMENT	160
PLENARY SPEECH.....	161

AN ANALYSIS OF URBAN GROWTH ON LAND SURFACE TEMPERATURE AND URBAN HEAT ISLAND EFFECT IN KURUNĀGALA MUNICIPAL COUNCIL AREA, SRI LANKA	163
STUDY THE TEMPORAL CHANGES OF LAND COVER AND ITS RELATION TO LANDSLIDES IN THE BADULLA DIVISIONAL SECRETARIAT DIVISION.....	172
SPATIAL AND TEMPORAL ANALYSIS OF POVERTY IN GAMPAHA DISTRICT	181
INTRODUCING STRATEGIES FOR DEVELOPING EXPORT AGRICULTURAL CROPS OF PEPPER, CINNAMON AND COFFEE IN MĀVATAGAMA DIVISIONAL SECRETARIAT DIVISION IN KURUNĀGALA DISTRICT, SRI LANKA	188
THE IMPACT OF URBAN LAND COVER CHANGES ON LAND SURFACE TEMPERATURE IN COLOMBO MUNICIPAL COUNCIL AREA BASED ON GEOSPATIAL DATA	193
ANALYSIS OF COMMUNITY KNOWLEDGE, AWARENESS, AND PREVENTIVE PRACTICES OF THE DENGUE EPIDEMIC IN THE BADULLA DIVISIONAL SECRETARIAT DIVISION, SRI LANKA	206
THE RELATIONSHIP BETWEEN DIAMETER AND DEPTH OF POTHOLES ERODED BY FLOWING WATER IN KURU RIVER, SRI LANKA	213
ENHANCING URBAN SUSTAINABILITY: POTENTIAL GREEN SPACES IN THE KANDY MUNICIPAL COUNCIL	219
TRACK 04 SOCIETY, POLITICS AND MEDIA STUDIES	230
PLENARY SPEECH.....	231
EXPLORING THE IMPACT OF ADAPTIVE DANCE TECHNIQUES ON THE WELL-BEING AND SOCIAL INCLUSION OF INDIVIDUALS WITH SPECIAL NEEDS	235
A PSYCHOLOGICAL STUDY OF THE IMPACT OF SMARTPHONE ADDICTION ON THE MENTAL HEALTH AND WELL-BEING OF UNIVERSITY STUDENTS	243
RESETTLEMENT AND SOCIAL FRAGMENTATION: WITH SPECIAL REFERENCE TO CONFLICT OF RESETTLED VEDDA COMMUNITY IN SRI	

LANKA	248
REEVALUATING SECULARISATION: UNDERSTANDING THE ROLE OF RELIGION IN NAWAGAMUWA PATTINI DEVĀLAYA	255
A COMPREHENSIVE INVESTIGATION INTO THE SCHOLARLY ARGUMENTS SURROUNDING THE BUDDHIST CONCEPT OF NIRVĀṆA.....	259
A GRIEF COUNSELING INTERVENTION AFTER MASS TRAUMA: LESSONS LEARNT FROM THE VICTIMS OF THE EASTER SUNDAY ATTACK IN SRI LANKA.....	263
THE IMPACT OF GENDER STEREOTYPES ON ADMINISTRATIVE DECISION MAKING IN SRI LANKA: STUDY BASED ON THE ADMINISTRATIVE INSTITUTIONS IN YATAWATTA DIVISIONAL SECRETARIAT	269
THE IMPACT OF AGING WORKFORCE ON PUBLIC SECTOR PRODUCTIVITY: WITH SPECIAL REFERENCE TO THE KANDY MUNICIPAL COUNCIL’S PAY & GO INITIATIVE PROGRAMME	274
THE EFFECTIVENESS OF THE "ASWESUMA" WELFARE PROGRAMME ON THE DEVELOPMENT OF LOW-INCOME COMMUNITY; A STUDY BASED ON THE ĪPANĀYAKA DIVISIONAL SECRETARIAT AREA.....	279
ADDRESSING SYSTEMIC DISCRIMINATION AND POST-WAR RECONCILIATION CHALLENGES FOR THE TAMIL ETHNIC GROUP IN SRI LANKA	284
IMPACT OF EMOTIONAL INTELLIGENCE ON EMPLOYEE'S ORGANISATIONAL COMMITMENT: A CASE STUDY IN DSI COMPANY	288
NATIONAL INTERESTS AND POLICY FORMATION: AN ANALYTICAL STUDY OF GREEK-PERSIAN DIPLOMACY DURING THE PELOPONNESIAN WAR...	296
TRACK 05 LANGUAGE, LINGUISTICS, LITERATURE AND CULTURE	301
PLENARY SPEECH	302
FROM ACTION STAR TO ABSURDITY: A SEMIOTIC INVESTIGATION OF THE “CHUCK NORRIS” INTERNET PHENOMENON AS A SOURCE OF MEMES....	306
BEYOND BLACK AND WHITE: A LITERARY EXPLORATION OF RACIAL FABRICATION IN ABSALOM, ABSALOM! AND INVISIBLE MAN	314

THE MOTIF OF PHANTOM IN RELATION TO POLITICAL VIOLENCE IN SRI LANKA: A COMPARATIVE STUDY ON SELECTED POST-COLONIAL NARRATIVES.....	319
SRI LANKAN ENGLISH SYNTACTIC FEATURES ON SOCIAL MEDIA: A STUDY BASED ON THE YOUTUBE CHANNEL BLOCK AND DINO	325
EXPLORING THE BUDDHIST UNDERCURRENTS IN JEAN DE LA FONTAINE'S FABLES: A COMPARATIVE ANALYSIS WITH “JĀTAKA TALES”	329
A CRITICAL STUDY ON SARASŌTHIMĀLAI: A TAMIL LITERATURE STAGED IN THE SINHALESE KING’S ROYAL COURT.....	334
THE POWER OF CHOICE: BEYOND THE MARITAL BIND - A PSYCHOANALYTIC, FEMINIST AND HEGELIAN ANALYSIS OF A DOLL’S HOUSE BY HENRIK IBSEN AND JASMINE BY BHARATHI MUKHERJEE	339
THE IMPACT OF SOCIAL CAPITAL ON ENGLISH LANGUAGE ACHIEVEMENT IN THE SRI LANKAN CONTEXT.....	347
CHINESE IDIOM ACQUISITION IN A NON-NATIVE CONTEXT: STRATEGIES AND CHALLENGES FOR SRI LANKAN CHINESE LANGUAGE LEARNERS..	353
THE IMPACT OF NATIVE LANGUAGE INTERFERENCE ON PHONOLOGICAL ERRORS IN SRI LANKAN ENGLISH SPEAKERS IN THE COLOMBO DISTRICT	364
CROSS-CULTURAL ADAPTATION OF NATIVE CHINESE TEACHERS IN SRI LANKA: CHALLENGES AND STRATEGIES	372
PRONOUNCING GERMAN: CHALLENGES FACED BY SINHALESE LEARNERS OF GERMAN AS A FOREIGN LANGUAGE (CEFR LEVEL A2)	380
OVERCOMING LINGUISTIC BARRIERS: ANALYSING MORPHOLOGICAL ERRORS IN GERMAN WRITING AMONG SINHALESE LEARNERS OF GERMAN AS A FOREIGN LANGUAGE.....	384
TRANSLATING HUMOUR BASED ON CULTURAL REFERENCES: ASTERIX IN BRITAIN IN SINHALA	391
REVISITING VENUTI’S FOREIGNISATION IN TRANSLATING MAGICAL REALISTIC NOVELS: A STUDY WITH SPECIAL REFERENCE TO ONE HUNDRED YEARS OF SOLITUDE AND ITS SINHALESE TRANSLATION SIYAK	

VASAKA HUDAKALĀVA	395
REVISITING BAKER’S STRATEGIES IN SUBTITLING DIALECTS, WITH SPECIAL REFERENCE TO MĀṆIKKĀVATA TELEDRAMA	401
A STUDY ON THE USE OF ADAPTATION TECHNIQUE IN STAGE DRAMA: WITH SPECIAL REFERENCE TO THE SINHALESE TRANSLATION OF ‘THE CAUCASIAN CHALK CIRCLE’ BY BERTOLT BRECHT	408
INVESTIGATING TRANSLATION ERRORS IN TAMIL TO SINHALA MACHINE TRANSLATION SYSTEMS: A STUDY OF 'GOOGLE TRANSLATE' AND 'SUBASA'	414
ADAPTATION AS A STRATEGY IN TRANSLATING CULTURE-SPECIFIC EXPRESSIONS: A COMPARATIVE ANALYSIS OF THE ENGLISH DRAMATIC TEXT 'THE PROPOSAL' TRANSLATED BY JULIUS WEST AND ITS SINHALESE ADAPTATION BY U. A. GUNASEKARA.....	421
ANALYSING GOTTLIEB’S STRATEGIES FOR TRANSLATING SINHALESE COLLOQUIAL EXPRESSIONS INTO ENGLISH SUBTITLES: A CASE STUDY OF THE FILM “MACHAN” DIRECTED BY UBERTO PASOLINI	428
RESOLVING THE UNTRANSLATABILITY OF RELIGIOUS-SPECIFIC TERMINOLOGIES IN THE NON-LITERARY TEXTS THROUGH THE APPLICATION OF SPECIFIC TRANSLATION PROCEDURES	434
EXPLORING TRANSLATION THEORIES: FROM PRESCRIPTIVE TO THE TRANSLATION OF SPECIALIZED MEDICAL TERMINOLOGIES FROM ENGLISH TO TAMIL	441
EXPLORING THE CHALLENGES FACED BY INTERPRETERS: WITH SPECIAL REFERENCE TO SIMULTANEOUS PARLIAMENTARY INTERPRETERS IN SRI LANKA	448
PRESERVING HUMOUR DURING FANSUBBING: WITH SPECIAL REFERENCE TO THE ENGLISH COMEDY MOVIE ANCHORMAN: THE LEGEND OF RON BURGUNDY	453
TRACK 06 ENGLISH LANGUAGE TEACHING AND INNOVATIVE EDUCATION PRACTICES.....	458

PLENARY SPEECH	459
REDUCING SPEAKING ANXIETY: A CASE STUDY ON IMPROMPTU SPEECHES AMONG FIRST-YEAR UNDERGRADUATES	462
REQUIREMENT OF ADAPTING ENGLISH CURRICULA OF ENGINEERING EDUCATION TO ENHANCE ENGLISH LANGUAGE COMPETENCE IN THE WAKE OF THE POST-PANDEMIC ECONOMIC DOWNTURN	469
UNDERSTANDING THE MOTIVATORS AND BARRIERS TO RESEARCH ENGAGEMENT AMONG ENGLISH LANGUAGE TEACHERS OF SELECTED UNIVERSITIES	476
A FEASIBILITY STUDY ON THE IMPLEMENTATION OF HYBRID LEARNING IN A GOVERNMENT UNIVERSITY IN SRI LANKA	482
PERCEPTIONS OF ESL LEARNERS ON, AND THEIR MOTIVATION TO, ALTERNATIVE ASSESSMENTS: A STUDY FROM A SRI LANKAN UNIVERSITY	486
CHALLENGES FACED BY ESL TEACHERS IN TEACHING LISTENING: A STUDY BASED ON JUNIOR SECONDARY ESL TUTORS IN KELANIYA REGION	492
EFFECTS OF ENGLISH LANGUAGE TEACHER TRAINING ON TEACHING PERFORMANCE OF JAPANESE PUBLIC JUNIOR HIGH SCHOOL ENGLISH TEACHERS	497
EXAMINING CULTURALLY RESPONSIVE PEDAGOGY IN THE ESL CLASSROOM THROUGH TEACHERS' INSIGHTS: A CASE STUDY IN A SRI LANKAN STATE UNIVERSITY	506
ESL TEACHER PERCEPTIONS OF CLASSROOM MANAGEMENT STYLES: A CASE STUDY IN SRI LANKAN SCHOOLS	512
FIRST YEAR UNDERGRADUATES' PERCEPTIONS OF A READING CLUB AS A LANGUAGE SUPPORT PROGRAMMEME AT A FACULTY OF MEDICINE OF A STATE UNIVERSITY	518
AN EXAMINATION OF THE PEDAGOGICAL IMPACT OF FLIPPED LEARNING ON INSTRUCTION IN ENGLISH AS A SECOND LANGUAGE CLASSROOMS	524
INVESTIGATING THE EFFECT OF TEACHERS' EMOTIONAL WELLBEING ON	

POLITE BEHAVIOUR AND ENGLISH TEACHING EFFECTIVENESS: A CASE OF ENGLISH TEACHERS IN BADULLA DISTRICT, SRI LANKA	530
THE EFFECT OF ECOLOGICAL ENVIRONMENTS ON STUDENTS' METACOGNITION AND ENGLISH LEARNING PERFORMANCE OF SECONDARY STUDENTS: A CASE OF BADULLA EDUCATIONAL ZONE IN SRI LANKA	534
AN INVESTIGATION INTO THE LANGUAGE-SPECIFIC CHALLENGES AND NEEDS OF THE FIRST YEAR UNDERGRADUATES IN AN ENGLISH MEDIUM INSTRUCTION (EMI) CONTEXT	539
A GENRE-BASED APPROACH TO THE USE OF MATRIMONIAL ADVERTISEMENTS IN TEACHING ENGLISH AS A SECOND LANGUAGE TO ADULT LEARNERS	543
AUTHENTICITY AND CRITICAL THINKING IN THE AGE OF GENERATIVE AI: AN EXPLORATION BASED ON STUDENTS IN AN ADVANCED UNDERGRADUATE READING/WRITING COURSE IN A SRI LANKAN STATE UNIVERSITY	548
CULTURAL KALEIDOSCOPE: TEACHERS' INSIGHTS ON INTEGRATING CULTURE IN ENGLISH LANGUAGE TEACHING	553

THE KEYNOTE SPEECH

Ms. Samadanie Kiriwandeniya

Director of Sanasa International Pvt Ltd

**"Enabling the Future through Resilience,
Social Stability, and Ecological Stewardship"**

Distinguished guests, esteemed colleagues, ladies
and gentlemen



It is both an honour and a privilege to stand before you today as we begin a conversation about the future of our planet, our community and our shared responsibility to build a more sustainable, equitable, and resilient world.

As you know, we live in a time of unprecedented challenges. We are witnessing climate catastrophes, geopolitical instability, polarized economies, pandemics and other health crises, which create immense destitution and massive numbers of refugees. As such, the theme of the conference could not be timelier. The three concepts that the conference will explore - Resilience, Social Stability, and Ecological Stewardship - are fundamental to the task of navigating these turbulent times.

I will share with you how I understand each of these concepts. I will also pose some questions which I believe we need to address over the next few days.

Let me begin with resilience. What is resilience? Is it to be able to withstand adversity, recover from shocks and emerge stronger? In a global economy with ever increasing technological disruption, where accumulation of capital and monopoly are the norms of market interactions, where preservation of universal human rights is becoming a selective choice of powerful nations, what does it mean for a small nation like ours to be resilient?

Does resilience mean continuously adopting to the changing scenarios, keeping remolding the nation to fit new world orders? Is it to mimic the so-called powerful nations and copy their systems in the belief that this will enable us to become more affluent and stronger? Is it to take sides with the apparent winners without becoming a victim of wars amongst the so-called powerful nations? Or is it to build our own systems and create a brand that is authentic and disruptive enough to not just bounce back from shocks but bounce forward as a nation? I invite you to dig deeper into yourselves to find answers to these questions through your deliberations at this conference. Whatever path we choose, I believe that resilience will involve strengthening

our infrastructure, improving our disaster preparedness, and fostering a culture of innovation.

But resilience is not just about disaster preparedness or about getting infrastructure and technology right. It is about building a nation that can stand together in the face of adversity, where individuals are empowered internally and externally to support one another in times of crisis, where people think as a community and foster a culture of innovation. It requires an education system that entertains humanities as much as entrepreneurship, healthcare systems and social safety nets that are designed to not just look after the able but the most vulnerable; a resilient society is a society that is socially stable and embraces its diversity and thrives due to its pluralism.

After living through a 30-year war and two insurgencies, I think we all can understand how social stability underpins every aspect of our well-being. We do not need deep discussions but a simple click on social media to see how the world order is collapsing due to the lack of this pluralism and tolerance. As a human race we are ethnically, racially, geographically, politically, culturally and now digitally divided and polarised. Social stability is not just the absence of conflict; it is the presence of social cohesion, justice, and equality. It is about finding ways to bring pieces of the puzzle together to make a big picture which we all can own. As social scientists, we must find ways to understand not only how a society is stratified, how identities are created and how dualities lead to polarization, but also how we can harmonize the different elements into a synergized rhythm so we can heal and move forward.

If we are to think of a resilient and sustainable tomorrow, we must build societies where trust, inclusion, and shared responsibility are the norms. This requires addressing the root causes of inequality—whether they are based on access to education, healthcare, technology, or basic human rights. This calls for fair and democratic systems where individuals are empowered to participate not only in the execution, but also in envisioning, designing and relevant decision making in the nation building exercise. In a globally interconnected reality, we are not privileged to think as an island. The instability of many nations today is connected with global geopolitical realities. It is therefore important that we are stronger as a society internally and also have healthy relationships with other nations. For this, we need to identify the ingredients that can establish peaceful boundaries among nations. We should therefore ask ourselves what we can do as scholars, teachers, student leaders, citizens, parents and spouses to inculcate the values that bring people together to work as a collective so that the challenges we face as a society can be addressed with ease.

The third element, the last but the most important, that you will be focusing on in this conference will be environment stewardship. The future we envision—one that is resilient and stable—can only be realized if we live in harmony with the natural world. All of us have learnt from the time we were very small that the future of our planet is inextricably linked to the well-being of humanity. However, we do not often enough consider the impact of human action on the wellbeing of our planet. On the one hand we spend many millions of dollars to find a planet that is remotely suitable for life. Simultaneously our actions and the conflicts we create threaten the very planet we live in. Climate change, biodiversity loss, and environmental degradation are not distant threats; they are here, now, and they are already having profound and tragic effects on our ecosystems, our economies, and our societies. I therefore believe that we stand at a critical moment in history where our humanity and our wisdom are being profoundly tested.

Ecological stewardship is not just about conservation; it is about regeneration. It is about restoring the land, the oceans, and the air, and ensuring that our natural resources are used responsibly and equitably. It is about ensuring that future generations inherit a planet that is capable of sustaining life, in all its diversity and richness. It is about being conscious about the ways we interact with nature, and the values we pass down to our grandchildren. In the quest for productivity, profitability and individual oriented entrepreneurship do we promote a value system that ensures the sustainability? This is a question we need to address very seriously.

In closing my keynote address, let me say that the three concepts you are discussing today are not isolated but deeply interconnected. A society that is resilient is also a society that is stable and just, and has a sustainable system to protect its natural resources in a regenerative manner. The challenge before us is immense, but it is not insurmountable. Together, we have the knowledge, the tools, and the creativity to build a better world. But this requires collective action, a shared vision, and an unwavering commitment to our common future.

Cooperative systems play a crucial role in community resilience by fostering collaboration, mutual support, and resource-sharing. They enhance local economies, reduce inequality, and build trust among members, making communities more adaptable in times of crisis. By empowering individuals, cooperatives strengthen social networks, promoting sustainable development and long-term stability. I believe that the time has come to bring this topic into formal education and into management theories. Social capital and cooperative enterprises, in other words, needs to become more prominent elements in the academic discourse related to the issues that concern us.

Many would say that comparatively we are too small a country to change global currents and that we are lacking in many things; that we are a nation with a vulnerable economy deserted by its youth due to lack of promise. Yet, should we allow the changes and the events that happened to us and around us to determine who we are? Can we instead start looking at who we are and what we have as a nation and build on that? Can we rebrand ourselves as a nation that is resilient, that is climate friendly, socially diverse and harmonious? This requires a deep dive which I invite all of you to undertake to find a future that can promise a stable and sustainable tomorrow which can stand on its own and continuously rebuild itself.

Let us recognize that the future is not something that happens to us—it is something that we create. And the choices we make today will shape the world of tomorrow.

Thank you

18 December 2024

Guest Speech

Building a Sustainable Future: The Interconnection of Resilience, Social Stability, and Ecological Sustenance

Dr. Lakshika Liyanage

**Dean of the Faculty of Management,
Social Sciences and Humanities, General
Sir John Kotelawala Defence University,
Ratmalana**



Resilience, social stability, and ecological sustenance are indispensable components of sustainable development and directly contribute to achieving the United Nations Sustainable Development Goals (SDGs). These three interconnected concepts address the pressing challenges of our time, including climate change, socio-economic inequalities, and environmental degradation, while paving the way for long-term prosperity and harmony. Resilience empowers societies to recover from adversities such as natural disasters, economic shocks, and health crises. Social stability fosters peace, justice, and strong institutions, creating equitable and thriving communities. Ecological sustenance safeguards biodiversity and ensures the responsible use of resources, forming the foundation for human and environmental well-being. This essay explores the significance of these pillars under the SDGs, highlights successful global practices, and evaluates Sri Lanka's current efforts, proposing recommendations for strengthening these principles to secure a sustainable future.

Resilience, the ability to adapt to and recover from challenges, is essential for sustainable development. It is particularly relevant to SDG 11, which focuses on building sustainable cities and communities, and SDG 13, which calls for urgent climate action. Resilient systems mitigate the impacts of disasters and crises, reducing recovery time and minimising economic and human losses. The UN Office for Disaster Risk Reduction reports that economic losses from disasters exceeded \$3 trillion globally in the past two decades, underscoring the urgent need for investments in disaster preparedness. Japan serves as a model of resilience through its comprehensive disaster management programs. Following the devastating 2011 tsunami, Japan implemented advanced early warning systems and community-based training that saved lives and enabled faster recovery. Similarly, Rwanda's remarkable transformation after the 1990s genocide exemplifies resilience at a socio-economic level. Prioritising governance reforms, reconciliation, and social empowerment programs, Rwanda has become a model of African development.

Social stability plays a pivotal role in creating peaceful, inclusive, and thriving societies, aligning with SDG 16, which promotes peace, justice, and strong institutions. Stability ensures equitable resource distribution, fosters public trust, and provides an environment conducive to innovation and growth. Scandinavian countries like Sweden, Norway, and Denmark demonstrate how robust welfare systems, participatory governance, and policies emphasising equity can create harmonious and prosperous societies. Singapore offers another inspiring example. Despite resource limitations, Singapore has cultivated multicultural harmony and meritocratic governance, transforming itself into one of the world's most competitive economies. Its focus on urban safety, efficient public services, and cohesive community policies highlights how stability drives national success.

Ecological sustenance, the third pillar, ensures the long-term viability of life on Earth. It involves managing natural resources sustainably, conserving biodiversity, and mitigating environmental harm. This pillar aligns with SDGs 12, 14, and 15, which focus on responsible consumption, life below water, and life on land. As ecosystems face unprecedented threats from deforestation, pollution, and climate change, urgent action is necessary to avoid irreversible damage. Costa Rica has emerged as a global leader in ecological sustainability, achieving nearly 100% renewable electricity production and doubling its forest cover in three decades. Germany's Energiewende, or energy transition, highlights how policies focused on renewable energy can address climate challenges while driving industrial innovation. Both examples show that environmental protection and economic growth can go hand in hand.

Global examples illustrate that resilience, social stability, and ecological sustenance are not theoretical ideals but practical frameworks for achieving lasting development. They provide valuable lessons for countries like Sri Lanka, which has significant potential but faces considerable challenges in implementing these principles effectively.

Sri Lanka's resilience initiatives, such as the National Adaptation Plan and programs by the Disaster Management Centre, focus on addressing climate risks and enhancing disaster preparedness. Flood control mechanisms, drought mitigation projects, and public awareness campaigns have laid a solid foundation for disaster risk reduction. However, challenges persist due to limited funding, inadequate community involvement, and delays in implementing resilient infrastructure. Enhancing resilience requires greater local engagement in disaster planning and stronger international collaborations for financial and technical support.

In social stability, Sri Lanka has made strides through post-conflict

reconciliation efforts, including initiatives led by the Office of National Unity and Reconciliation. These efforts aim to heal divisions and rebuild trust among communities. Educational reforms and community programs contribute to fostering peace and inclusivity. However, governance inefficiencies, economic disparities, and social inequalities continue to undermine progress. Strengthening participatory governance and addressing structural inequalities are essential for achieving lasting harmony.

Ecological sustenance is a priority in Sri Lanka, with conservation programs like the protection of the Sinharaja Rainforest and renewable energy targets demonstrating the country's commitment to sustainability. Yet threats such as deforestation, urban expansion, and unsustainable agriculture remain significant. Enforcement of environmental regulations and community-based conservation initiatives are critical for bridging the gap between policy and practice. Sri Lanka's rich biodiversity and natural resources offer immense potential for eco-friendly industries, sustainable tourism, and renewable energy projects that can balance environmental preservation with economic growth.

To overcome challenges and unlock its potential, Sri Lanka must invest in disaster-resilient infrastructure and expand community-based preparedness programs. Incorporating citizens into decision-making processes and promoting education focused on reconciliation and diversity will strengthen social stability. Ecological efforts can be enhanced by incentivising sustainable tourism and green entrepreneurship, enforcing environmental laws, and raising public awareness about conservation.

Resilience, social stability, and ecological sustenance are interdependent pillars that underpin sustainable development. Their integration has enabled nations like Japan, Costa Rica, and Scandinavia to achieve remarkable success. For Sri Lanka, embracing these lessons through innovative policies, robust implementation, and collective action can lead to a future defined by harmony, equity, and environmental stewardship. This vision aligns with national priorities and global commitments to secure a sustainable and inclusive future for all.

18 December 2024

TRACK 01
ECONOMICS AND MANAGEMENT FOR
DEVELOPMENT

THE COMPETITIVENESS OF CEYLON TEA IN THE INTERNATIONAL MARKET

K.A.S. Niranjala^{1*}, U.S. Thathsarani²

^{1, 2} *Department of Economics and Statistics, Faculty of Social Sciences and Languages, Sabaragamuwa University of Sri Lanka*

Abstract

Ceylon tea, renowned globally for its quality, has been a cornerstone of Sri Lanka's economy. Despite maintaining a premium price in the international market, the Sri Lankan tea industry faces complex production, export volumes, and challenges in global competitiveness. This study evaluates whether continuing to export Ceylon tea is beneficial or constitutes a misallocation of resources given the current competitive landscape. The paper seeks to identify the comparative advantage of Ceylon tea in the global market by analysing the export value of tea from four major tea-exporting countries from 1990 to 2022. The analysis employs the Revealed Symmetric Comparative Advantage (RSCA) method. Findings indicate that Ceylon tea holds a high comparative advantage. Additionally, Kenya, the main competitor of Ceylon tea, is analysed using Pearson correlation to understand the relationship between their export performances.

Keywords: *Ceylon Tea Export, Competitiveness of Global Market, Comparative Advantage, RSCA, Pearson Correlation*

*Corresponding author: Tel.: +94 (77) 606 5641; Email: sachininiranjala@gmail.com; <https://orcid.org/0000-0001-7111-2233>

Introduction

Tea is a non-alcoholic beverage and the most famous beverage after water. Approximately 3 billion cups of tea are consumed daily worldwide (Hicks, 2009). Tea requires favourable climate and soil conditions. It can be quickly grown with an annual rainfall of at least 50 inches, a minimum temperature of 18°C, equal sunlight, and acidic soil, which is suitable for tea (Cheserek et al., 2015). In 1852, James Taylor planted the first tea plant in Loolecondara Estate, Galaha. Today, Sri Lanka grows tea in seven regions: Nuwara Eliya, Uva, Udu Pussellawa, Dimbulah, Ruhuna, Kandy, and Sabaragamuwa. Tea continues to play a significant role in Sri Lanka's economy. It is not just an export good; it provides thousands of jobs and tea tourists. Tea is one of the large agricultural exports from Sri Lanka. Despite its importance, recent data has shown a negative relationship between tea exports and the economy, with a gradual decrease in tea exports (Thasfiha et al., 2020). Sri Lanka was the top tea exporter in the world; however, according to the latest data, it is in the number 3 position. There are so many reasons behind this. Outgoing labour, less replanting, climate changes, political issues, and so on (Dissanayaka & Thibbotuwana, 2021).

There is a new challenge called Global Competitiveness. Previously, there were only a few countries that were involved with tea exports. But today there are lots of countries involved with the tea market. An international trade market is a marketplace that exchanges goods, services, and capital from one country to another country. In 1977, Sri Lanka opened its economy to the world (open economy). All the countries tried to get more advantage. Imports and exports are major parts of the international market. Sri Lanka exports different kinds of goods and services. Among them, tea takes a special place. Sri Lanka has a world-recognised tea brand. Sri Lanka was the number one tea exporter in the world from the late 1960s to the early 1970s (Nufile et al., 2013).

The main objective of this research is to determine if Sri Lanka still has a strong competitive position in the global tea market and to identify the major competitors.

Material and Methods

The population includes all tea-exporting countries in the world (countries involved in tea exports). Five countries were selected using the mapping method (Trade Map, 2022): Sri Lanka, China, Kenya, India, and Indonesia. Data were collected from secondary sources: Trade Map, International Tea Committee, and World Integrated Trade Solution. Tea export values and total

export values from 1980-2022 were gathered. A quantitative approach was used employing RSCA and Pearson correlation, and the analysis was conducted using Minitab.

In 1965, the Bela Balassa Seminal introduced a new concept to measure the comparative advantage of a nation; it is Revealed Comparative Advantage (Adigwe, 2022). This method is a powerful and famous index to measure competitiveness (Kathuria, 2013). Revealed Systematic Comparative Advantage is a modification of RCA; it fills the limitations of Bela's method (Laursen, 2015). This study employed the RSCA index to analyse the export competitiveness level of Ceylon tea.

Below are equations for calculating RCA and RSCA (Wibowo et al., 2018).

$$RCA_{ij} = \left[\frac{x_{ij}}{x_i} \right] \div \left[\frac{x_{wj}}{x_w} \right] \quad RSCA = \frac{(RCA - 1)}{(RCA + 1)}$$

x_{ij} = Export of production in a certain country.

x_i = Total export in a certain country.

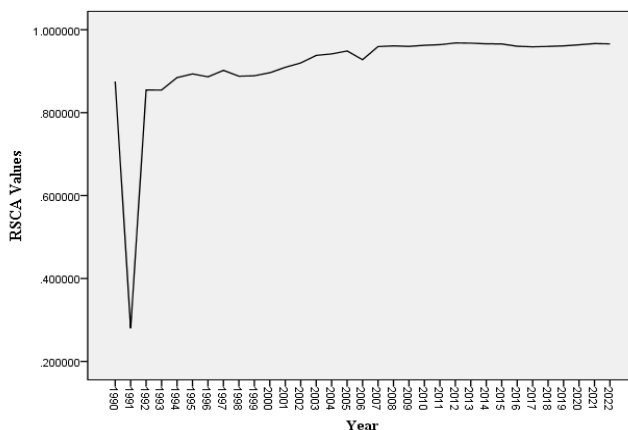
x_{wj} = Export of production in the world.

x_w = Total export in the world.

Results and Discussion

Figure 1:

Values of RSCA of Sri Lanka

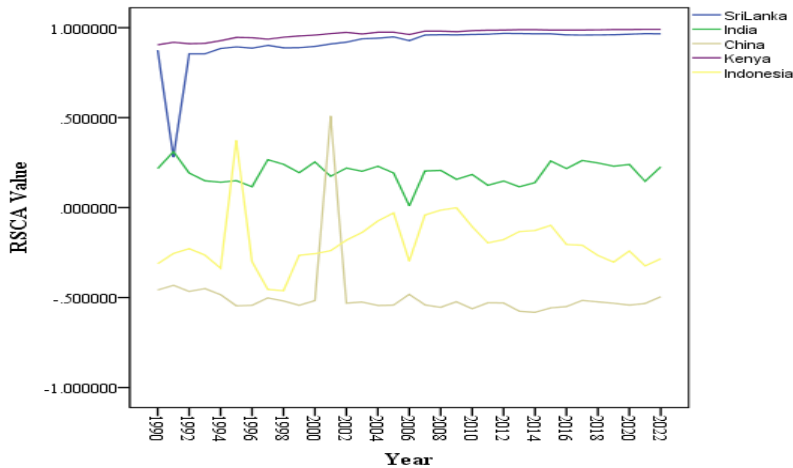


Note: Figure 1 output is generated by Minitab and does not extract from any source.

Sri Lanka always shows a positive index ($RSCA > 0$). This means there is a comparative advantage in tea exports, and all the values except 1991 were very close to zero. It means Sri Lanka has a strong, significant comparative advantage in tea exports.

Figure 2:

Values of RSCA of Major Tea Exporting Countries



Note: Figure 2 output generated by Minitab and does not extract from any source.

Kenya has more comparative advantage than Sri Lanka. India has a moderate comparative advantage, and China and Indonesia have a comparative disadvantage in most of the years. 1996 has shown a comparative advantage of Indonesian tea and in 2001, China showed a comparative advantage.

Table 1

Pearson Correlation of Major Tea Exporting Countries

	Sri Lanka	India	China	Kenya
India	-0.324 0.066			
China	-0.122 0.498	-0.032 0.860		
Kenya	0.577 0.000	-0.034 0.853	-0.135 0.452	
Indonesia	0.145 0.420	-0.142 0.431	-0.133 0.461	0.245 0.169

Note: Table 1 output was generated by Minitab and not extracted from any source.

Only Sri Lanka and Kenya have shown a statistically significant correlation.

There is a moderate positive (0.577) correlation between Sri Lanka and Kenya.

Khaliqi et al. (2020) found the following findings, and those are similar to this study's results. Sri Lanka has a high comparative advantage in exporting all types of tea, and the values are usually very close to one another. India has a moderate comparative advantage, and China has a comparative disadvantage in exporting tea. According to this research, Indonesia does not have a comparative advantage, but according to Khaliqi et al. (2020), Indonesia has a low comparative advantage in exporting tea.

Pearson correlation indicated that Kenya is the major competitor to Sri Lanka's tea exports. RSCA values also provide evidence for this. Kenya's RSCA values, which are always close to one another, are also greater than Sri Lanka's RSCA values. Parte et al. (2022) confirm this. In their research, they emphasise Kenya and Sri Lanka as the major competitors and their RSCA values always remain positive.

Conclusion and Recommendations

According to the RSCA index, Sri Lanka has a strong comparative advantage in exporting tea (all RSCA values are greater than zero and very close to one); it is only second to Kenya's tea exports. India also has a moderate comparative advantage. China and Indonesia have a comparative disadvantage in exporting tea.

According to the correlation analysis, Ceylon tea has only correlated with Kenya tea. So, Kenya is Sri Lanka's only competitor in Sri Lanka in exporting tea.

If it needs to compete with Kenya, the Kenyan tea market should be examined. Compared to Sri Lanka, it's a huge country, so it has to maintain or improve its quality standards.

References

- Adigwe, E. O. (2022). Comparative analysis of competitive trade in a cluster market of the European Union: The revealed comparative advantage (RCA) index. *Nase Gospodarstvo/Our Economy*, 68(1), 14–24. <https://doi.org/10.2478/ngoe-2022-0002>
- Cheserek, B. C., Elbehri, A., & Bore, J. (2015). Analysis of links between climate variables and tea production in the recent past in Kenya. *Donnish Journal of Research in Environmental Studies*, 2(2), 5–7. <https://donnishjournals.org/djres/pdf/2015/march/cheserek-et-al.pdf>

Dissanayaka, N., & Thibbotuwana, M. (2021). Sri Lanka's agri-food trade: Structure, opportunities, challenges and impacts of COVID-19. *Research in Agricultural & Applied Economics*, 57. <https://doi.org/10.22004/ag.econ.322050>

Hicks, A. (2009). Current status and future development of global tea production and tea products. *AU Journal of Technology*, 12(4), 251–264.

Kathuria, L. M. (2013). Analyzing competitiveness of clothing export sector of India and Bangladesh: Dynamic revealed comparative advantage approach. *Emerald Logo*, 23(2).

Khaliqi, M., Gurning, H., Novanda, R., & Simamora, O. (2020). Competitiveness of Indonesian tea in the international market. *International Conference on Agriculture, Environment and Food Security*.

Laursen, K. (2015). Revealed comparative advantage and the alternatives as measures of international specialization. *Eurasian Business Review*, 5, 99–115.

Nufile, A., Santhirasegaram, S., & Ismail, S. (2013). Sri Lanka's economic liberalization and its contribution to the economic changes: An empirical evidence after 1977. *Summer Internship Society*, 5(1), 76. <https://www.proquest.com/openview/b1ada14d9f8ed3f74fdffc6d85dcf76a/1?pq-origsite=gscholar&cbl=2030929>

Parte, J., Pandey, S., Patel, M., & Chandra, M. (2022). Growth, instability and export competitiveness of tea and coffee: An overview. *The Pharma Innovation Journal*, 11(7).

Thasfiha, M., Dissanayaka, D., & Arachchige, U. S. (2020). Sri Lankan tea industry. *Journal of Research Technology and Engineering*, 1(1), 47–53. <https://jrte.org/wp-content/uploads/2020/01/6.Sri-Lankan-Tea-Industry-.pdf>

Trade Map. (2022). Trade statistics for international business development. *International Trade Centre*.

Wibowo, R., Iddrisu, Y., Darus, M., & Sihombing, L. (2018). Pricing behavior of USA exporter in wheat international market. *IOP Conference Series: Earth and Environmental Science*, 122(1).

ECONOMIC EFFECTS OF INTERNATIONAL TOURIST ARRIVALS TO SRI LANKA ACCORDING TO THE TOURISM DESTINATIONS: EVIDENCE FROM 1989-2019

E.V.D. Dilhani^{1*}

¹*Department of Economics, University of Ruhuna, Sri Lanka*

Abstract

Tourists' receipts play a significant role in economic growth in Sri Lanka. The study was intended to examine the economic effects of international tourists' arrivals to Sri Lanka along with their destination selection. This is the first study that addressed the tourism impact on the economy separately for several tourist destinations. The study was based on secondary time series data from 1989-2019. Time series regression was estimated using stationary variables in their level form with a structural break in 2009. The statistical evidence of the study provided enough evidence to confirm that tourist visits to museums and zoo gardens made a significant impact on the economy rather than other tourist sites in the study. So, it's timely important to pay attention to the strategic change in those sites to attract more tourists to those destinations.

Keywords: *Economic Effect, Gross Domestic Production, Heritages in Sri Lanka, International Tourist Arrivals, Tourism Destinations*

**Corresponding author: Tel.: +94 (70) 187 3490; Email: evddilhani@gmail.com; <https://orcid.org/0000-0002-7660-3241>*

Introduction

Tourism plays a vital role in each and every economy that uses tourism. Tourism substantially contributes to the gross domestic production of the country, improves employment opportunities, and also generates foreign income for the host country (Karunanayake, 2017, Thabani, 2019). Sri Lanka is an attractive tourist destination with pristine beaches, cultural heritage, idyllic environmental conditions, wildlife, etc. The Pearl of the Indian Ocean is a mesmerising destination with attractive tourist destinations. To improve the benefit of tourism on the Sri Lankan economy by considering the tourists' attraction to destinations in Sri Lanka is a timely, important topic. Even though we have a general idea that all international tourists visit all tourist attractive destinations in Sri Lanka, the empirical evaluations have proven that there are some hidden variations in receipt amounts among those destinations. This study was intended to evaluate the economic effects of international tourist arrivals to Sri Lanka along with some data available on tourism destinations such as botanical gardens, the cultural triangle, museums, wildlife, and zoo gardens in Sri Lanka, with evidence from 1989-2019. The empirical estimations of the study delve deeper into the empirical relationship between tourism earnings and the gross domestic production of Sri Lanka. Since it does not have a direct variable to represent the economic sector related to tourism directly, the Gross Domestic Production (GDP) was utilized as a proxy variable to represent the economic sector in the model. The first objective of the study was to identify the pattern and trends of categorized tourist earnings according to the destination over time. The second objective was to offer valuable insights into the developments in the tourism sector, to identify key points for policy improvement, and to facilitate considerable facts for stakeholders in the tourism industry. There are a number of studies that have addressed the relationship between tourism earnings and their impact on the economy. However, this study is the first empirical study that addressed the relationship between tourists' receipts of several tourist destinations to the economy of the country. The speciality of applied time series techniques was, and the findings of the study were deeply discussed in the next phase of the study. Empirical models have shown that there are some disparities among tourists' earnings in different tourist destinations in Sri Lanka. The study confirmed some important benchmarks for the tourism and tourism-led growth strategy in Sri Lanka during the past, present, and future in Sri Lanka.

Material and Methods

This study utilises time series analysis to examine the relationship between international tourist arrivals to Sri Lanka, along with some selected tourist

destinations, and its impact on GDP. The data availability was the main reason to select a few destinations in the study. Tourists' arrival data were represented by the tourist earnings in the empirical model. The data was obtained from the annual reports of the Tourism Development Authority of Sri Lanka. GDP was the proxy variable to represent the economy in the model. GDP data for the corresponding period were obtained from the Central Bank annual reports of Sri Lanka. Preliminary analysis of the variable was punctuated as the first step of the analysis. Secondary analysis of the study started with the Augmented Dickey-Fuller (ADF) test. The structural breaks of all selected variables were addressed from the unit root test of the study by using the level form, stationary time variables, and time series regression model with autoregressive terms. The model was estimated using a backward approach to conclude the study.

Results and Discussion

The results of the time series analysis reveal significant insights into the relationship between international tourist arrivals to Sri Lanka and their impact on GDP. A time series line plot was used as the starting point of the data analysis. Also, it was used as a part of the preliminary analysis of the study. The time series line plot is presented in Figure 1 below. All-time series variables were stationary at their level form under the break unit root test. The break unit root test was applied here by including the structural variables of the study too. The ADF test with structural break confirmed a structural break in the variables in 2009. With the structural break in the unit root test, all variables were stationary in the level form. Then, the empirical findings of the study were estimated using a time series regression model. The results of the unit root test are presented in table 1 below.

Table 1:

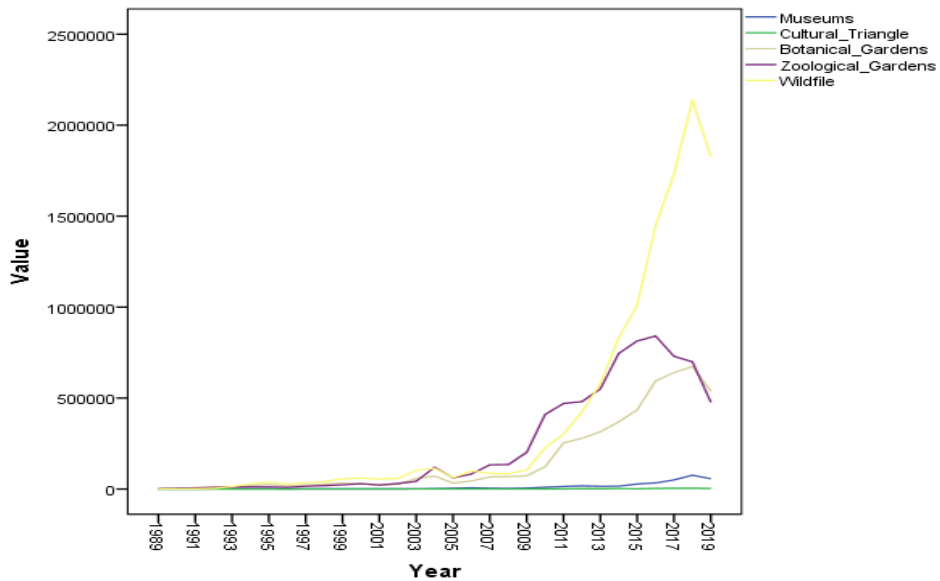
ADF test results for unit root test in level form with breakpoints

Variable	Level	Specification	Test stat.	T stat. ($\alpha=0.05$)	Prob. Value
GDP	Level	Trend and Intercept	-5.0536	-4.8598	0.0282*
Cultural Triangle	Level	Trend and Intercept	-5.0955	-4.8598	0.0249*
Museums	Level	Trend and Intercept	5.0600	-3.5664	0.0671**
Wildlife	Level	Trend and Intercept	-1.5229	-4.1935	<0.01*
ZOO garden	Level	Trend and Intercept	-3.9811	-3.5664	<0.01*
Botanical Gardens	Level	Trend and Intercept	-7.3070	-4.8598	<0.01*

* The variable is stationary under $\alpha=0.05$, ** The variable is stationary under $\alpha=0.10$.

Figure 1:

Time series line plot of tourist arrivals along the selected destinations



Source: Annual Statistical Report, SLTDA

According to the time series line plot, it could be identified as parallel behaviour in museums and the Cultural Triangle. The time series plots of tourist visits related to the botanical gardens, zoological gardens, and wildlife show a rapid increase after 2009. Tourist visits for wildlife were reported to be significantly higher during the last decade.

According to Table 1, all variables were significant under the 90% confidence interval and broke the unit root test with trend and constant over the selected time. Since the independent variables of the model are not the variables that have a main functional relationship with the dependent variable, the coefficients of the model were not interpreted. One major limitation of the study was selecting a dependent variable that is representative of the economic performance of the country, which is very close to the tourism sector. So, finally, GDP was selected as a proxy variable to represent the economy of the country in the empirical model. The second limitation of the study was related to the independent variables of the study. Even though there are several attractive tourist destinations in Sri Lanka, the revenue statistics are available only for some destinations in the annual report of the Sri Lanka Tourism Development Authority (SLTDA, 2022). All data-available variables were included in the static model in Table 02 of the study.

Table 2:
Time Series Regression Estimations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.08E+08	2.77E+08	3.274735	0.0031*
Botanical gardens	-2769.951	11101.30	-0.249516	0.8050
Cultural Triangle	694.5970	961.1915	0.722642	0.4766
Museums	119678.8	55766.16	2.146083	0.0418*
Wildlife	-1003.427	2978.586	-0.336880	0.7390
Zoo Gardens	10676.95	3258.349	3.276799	0.0031*
R-squared	0.958253 Akaike info criterion (AIC)			44.59489
Adjusted R-squared	0.949903 Hannan-Quinn criter.			44.68536
Log-likelihood	-685.2207 Durbin-Watson stat			1.337258
F-statistic	114.7681 Prob(F-statistic)			0.000000

*Significant under $\alpha=0.05$

Table 2 represents the best-fitted model among all estimated models in the study. The overall significance of the model was confirmed by the F statistics. The R-squared value is normally high in time series regression models. The selected model is the best model according to the lowest AIC value. Table 02 shows that there is enough statistical evidence to prove that tourist visits to museums and zoo gardens made a significant effect on tourism gross domestic production of Sri Lanka rather than other considered variables in the study.

Conclusion and Recommendations

According to the empirical analysis of the study, tourists' visits to museums and zoo gardens had a significant effect on tourism on the gross domestic production of Sri Lanka other than other selected variables in the study. Tourism-led growth is an applicable economic growth strategy for Sri Lanka. A number of previous articles have proven that the tourism-led growth hypothesis exists for Sri Lanka. (Dilhani & Abeynayake, 2022; Jayathilake, 2013.) Policymakers and industry stakeholders can formulate targeted strategies to promote tourism development in zoological gardens and museums in Sri Lanka.

References

Central Bank of Sri Lanka. (2020). Special statistical appendix: Trends in key economic variables from the annual report of Central Bank of Sri Lanka 2023.

Dilhani, E. V. D., & Abeynayake, N. R. (2022). How strong is the linkage between tourism and economic growth in Sri Lanka? Evidence from 1971–2020. *Journal of the University of Ruhuna*, 10(1), 7–24.

Jayathilake, P. M. B. (2013). Tourism and economic growth in Sri Lanka: Evidence from cointegration and causality analysis. *International Journal of Business, Economics and Law*, 2(2), 22–27. <http://ijbel.com/wp-content/uploads/2014/06/Tourism-AndEconomic-Growth-In-Sri-Lanka—EvidenceFrom-Cointegration-And-Causality-AnalysisP.M.-Bandula-Jayathilake.pdf>

Kumara, P. B. S. N. (2020). Study on the relationship between destination promotion factors and tourist arrivals to Sri Lanka. *Journal of Tourism Studies*, 5(2), 15–21.

Sri Lanka Tourism Development Authority. (2019). *Annual statistical report*. <https://www.sltda.gov.lk/en/about-us>

Thabani, N. (2019). Sri Lanka—the wonder of Asia: Analyzing monthly tourist arrivals in the post-war era. *Tourism Studies Review*, 0–21.

Warnakulasooriya, B. N. F., & Wijethunga, W. M. H. U. (2014). Destination image perception of international tourists: The case of Sri Lanka as a tourist destination. *International Journal of Tourism Research*.

MOTIVATIONAL DRIVES INFLUENCING BABYMOON TOURISM IN SRI LANKA

L.A.P.C. Perera^{1*}

¹*Gampaha Wickramarachchi University of Indigenous Medicine, Sri Lanka*

Abstract

Babymoon tourism has just started gaining popularity in wellness research. Babymoon, a pre-birth vacation for expecting couples, combines relaxation with the expectation of new parenthood. This study explores the motivational drives influencing babymoon travels in Sri Lanka, a niche market growing potentially related to wellness tourism. The study followed qualitative methods using snowball sampling and inductive thematic analysis. 15 expectant parents were interviewed, generating 4 key themes: recreation, romance, wellness, and food-oriented activities. Findings suggest that Sri Lanka's appeal is bolstered by its scenic landscapes, wellness retreats, and hospitable environment, providing a perfect backdrop for a rejuvenating getaway. Additionally, factors such as safety, accessibility, and customized services for pregnant women are critical in destination choice. By understanding these motivations, wellness tourism stakeholders in Sri Lanka can better cater to this growing segment, enhancing their offerings to attract and satisfy Babymooners.

Keywords: *Babymoon, Health Tourism, Motivation Niche Tourism, Wellness Tourism*

*Corresponding author: Tel.: +94 (71) 3651084; Email: chamthka@gwu.ac.lk
<https://orcid.org/0000-0001-7262-5526>

Introduction

Babymoon tourism is defined as an experience designed to help parents reconnect and enhance their health and well-being. Nowadays, the period of pregnancy holds significant personal and family importance. However, the fast-paced nature of modern life can make this period physically and emotionally challenging. In this context, the concept of a "babymoon" has emerged as a specialized form of health tourism aimed at alleviating the difficulties of pregnancy, fostering parental integration, and preparing parents for their upcoming roles (Vespestad, 2023). As a distinctive aspect of this niche concept, babymoon tourism specifically caters to the pregnancy period and is tailored for parents. This experience seeks to help parents overcome the physical and emotional challenges of pregnancy, share meaningful moments, and prepare for parenthood on a more solid foundation (Gabor and Oltean, 2019). The concept of a babymoon is formed by merging the terms "babies" and "honeymoon" and is generally considered a tourism concept where couples during pregnancy prefer to take one last vacation before the birth of their baby.

The transition to parenthood is a significant life event that often brings both joy and stress. Expectant parents, particularly pregnant women, frequently face heightened levels of anxiety, physical discomfort, and emotional fluctuations. By exploring the research problems, the study aims to fill critical empirical gaps in the literature regarding motivations for babymoon vacations in supporting the mental health of pregnant women and strengthening relationship satisfaction among expectant couples. Thus, the study aims to identify the primary motivational factors that drive expectant parents to choose Sri Lanka as their babymoon destination.

Material and Methods

The methodology consists of population and sampling, data, and data collection methods that are used for data analysis of the study to achieve the research objectives. This research has been designed to use a qualitative approach, where the objectives are achieved through the qualitative method. McKercher and Chan (2005) described qualitative research as an approach to exploring and understanding the meaning of individuals or groups to a social human problem. The research involves emerging questions when collecting data in the participant's setting and data analysis inductively building from relevant general themes. Semi-structured views were chosen to apply in this study as the research strategy following convenience sampling first and then snowball sampling second. Thus, 15 expecting parents out of the population

were considered as the sample for the study, while the sample unit is the pregnant population in Sri Lanka and international visitors to Sri Lanka. The data analysis was done using Inductive Thematic Analysis. Peer reviews were used to ensure the data validity and theme emergence.

Results and Discussion

The data collected from the interviewees provide many interconnected results that motivate babymoon tourism. Four (04) major themes originated.

Research Objective: To explore and identify the primary motivational factors that influence expectant parents to choose Sri Lanka as a babymoon destination.

Theme 1: Recreation-Oriented Activities

Beach relaxations, nature walks, scenic tours, cultural excursions, and wildlife safaris are major recreation activities that motivate babymoon travellers.

“I thought this hiking would make me so exhausted, but it made us stronger.”

Babymooners seeking enriching experiences prefer soft adventure activities, and they favour visiting historical sites.

Theme 2: Romance-Oriented Activities

Private dinners, couples' retreats, sunset cruises, and spa packages are major motives that arouse couples' romance during their travels.

“We enjoyed our romantic candlelight dinner and music with great pleasure. Even my son (unborn) joined us.”

They are highly sought after, offering couples intimate and memorable experiences. Private villas or secluded accommodations are preferred for their privacy and romantic ambience, allowing couples to bond in a serene environment. Tailored spa experiences for couples, including massages and aromatherapy, enhance romantic bonding while ensuring relaxation.

Theme 03: Wellness-Oriented Activities

These activities consisted of spa treatments, nutritional counselling, parental dance classes, parental yoga, sleep hygiene practices, nature walks, and hypnobirthing classes. Each of these activities was reported to offer unique bundles of benefits, enhancing the overall babymoon motivation. Spa treatments were consistently highlighted as a top activity contributing to mental health benefits. Many expectant parents reported feeling deeply relaxed and rejuvenated after receiving massages and other spa services.

Theme 04: Food-Oriented Activities

Many high-end restaurants in Sri Lanka offer menus specifically designed for expectant mothers, featuring dishes that are nutritious, safe, and tailored to dietary restrictions. Safe and curated street food tours introduce babymoon travellers to the vibrant street food scene in Sri Lanka, ensuring all foods offered are pregnancy-safe. Resorts with spas often provide customized spa menus featuring healthy, organic, and nutritious meals that complement the wellness treatments. Detox and wellness cuisines focus on detoxifying foods and beverages that promote health and well-being, such as fresh juices, herbal teas, and light, nourishing meals. Dessert and sweet workshops, cultural dining experiences, tea and juice pairings offering a sophisticated and non-alcoholic alternative to wine tastings, and farm-to-table experiences are some other food-oriented activities that motivate babymoon travellers.

“We enjoyed cooking together. It is different from what I cook at home alone. He helped me a lot.”

Understanding these motivations can help stakeholders in the Sri Lankan tourism industry to tailor their offerings and marketing strategies effectively, ensuring a memorable and satisfying babymoon experience for travellers.

Conclusion and Recommendations

Babymoon tourism in Sri Lanka is driven by a motivation for activities that balance relaxation, romance, wellness, and culinary enjoyment. Expectant parents seek destinations that offer a blend of recreational, romantic, wellness, and food-oriented experiences. Sri Lanka, with its diverse attractions and rich cultural heritage, is well-positioned to cater to these needs. Creating specialized packages, focusing on customization, and enhancing marketing strategies are recommendations for further enhancement. Compare Sri Lanka's babymoon offerings with those of other popular destinations, identifying competitive advantages and potential areas for enhancement that can be consummated as future research areas.

References

- Gabor, M. R., & Oltean, F. D. (2019). Babymoon tourism between emotional well-being service for medical tourism and niche tourism: Development and awareness on Romanian educated women. *Tourism Management*, 70(August 2018), 170–175. <https://doi.org/10.1016/j.tourman.2018.08.006>
- Junio, M. M. V., Kim, J. H., & Lee, T. J. (2017). Competitiveness attributes of a medical tourism destination: The case of South Korea with importance-

performance analysis. *Journal of Travel and Tourism Marketing*, 34(4), 444–460. <https://doi.org/10.1080/10548408.2016.1182454>

McKercher, B., & Chan, A. (2005). How special is special interest tourism? *Journal of Travel Research*, 44(1), 21–31. <https://doi.org/10.1177/0047287505276588>

Vespestad, M. K. (2023). Babymoon tourism: Co-creating well-being for traveling mothers. *Journal of Travel Research*, 62(6), 1277–1289. <https://doi.org/10.1177/00472875221125669>

IMPACT OF MARITAL STATUS ON WOMEN LABOUR FORCE PARTICIPATION: A STUDY BASED ON THE POTUHÄRA AREA

S.P. Abeysekara¹, W.M.D.H. Marambe^{2*}

^{1, 2} *Department of Economics, Faculty of Commerce and Management,
Eastern University, Sri Lanka*

Abstract

In this paper, the effects of marital status on women's employment rates in the Pothuhera region of Sri Lanka are examined using a quantitative research approach. To forecast the role of sociocultural and structural factors, the study using cross-sectional survey data from 120 women examines the connection between marital status and labour force participation. Data also show that marital status is related to the female labour force, as well as the fact that it demonstrates a positive correlation and is therefore a major factor that influences women's participation in the workforce. Even after applying the techniques in regression analysis, it is clear that marital status is a significant determinant of labour force participation, specifically for those who are married, and are more likely to participate in this market. In this regard, the study draws attention to the significance of gender analysis of the wider socio-economic contexts of factors as well as structural factors that might restrict women's employment and calls for multi-pronged efforts towards enhancing gender equality and women's economic empowerment in rural areas such as Pothuhera.

Keywords: *Employment, Family, Marital Status, Socio-Economic, Women's Labour Force*

*Corresponding author: Tel.: +94 (71) 9969869; Email: dimali.marambe@gmail.com

Introduction

Thus, women's labour force participation is not simply empowering the female gender; this is essential in propelling the economy (Schuler et al., 2011). The formation of Pothuhera, therefore, is coloured with social customs, gender roles, and necessities of the socioeconomic structure that presides over employment opportunities for women (George et al., 2022). Pothuhera employees are heterogeneous in terms of the skills they possess, the motivation of workers, and their social and economic backgrounds. Nevertheless, the mentioned diversity reflects input and challenges that women as fresh, inexperienced workforce entities encounter (Rahman & Akhter, 2021). The marital state plays a critical role in women's jobs and shapes their economic potential and ability to manage the socio-cultural demands. Marriage is particularly significant to most Pothuhera women since it is the time they can rely on the support of their family, and society and be economically productive (Pramanik et al., 2021). Analyzing the effects of marriage even in obtaining a job, this study works to give voice to the socially regnant patterns of male domination and the subjugation of women. These conclusions are of great significance for decision-making on the country's future as well as for the vigilance and organizational initiatives of grass-roots NGOs fighting against discrimination and striving for women's rights.

Material and Methods

This study employs a quantitative, cross-sectional research design to examine the relationship between marital status and employment status among women in Pothuhera. The sample was selected using convenience sampling, a non-probability sampling method where participants were chosen based on their accessibility and willingness to participate. A total of 120 women from the local area were included in the study, with the sample size determined by available resources and the ease of recruiting participants within the community. Women were approached at local gathering points, such as community centres, where those who met the criteria of being of working age and residing in Pothuhera were invited to participate. This approach, while limited in terms of generalizability, provides a practical and feasible way to gather preliminary data on the local population.

Data were collected through structured questionnaires administered in face-to-face interviews, allowing for clarification of any questions and reducing the likelihood of response errors. The questionnaire included demographic variables such as age, education level, and work experience. Descriptive statistics were used to summarize the demographic characteristics and

employment status of the participants. However, given the cross-sectional and exploratory nature of the study, detailed statistical modelling was not pursued, as the primary goal was to identify basic trends and relationships rather than establish causation. This initial analysis offers insights that can help inform future research with more robust sampling and analytical techniques aimed at understanding the determinants of women's employment in Pothuhera.

Results and Discussion

Table 1:

Age

How old are you?				
	Frequency	Percent	Valid Percent	Cumulative Percent
18-24	12	10.0	10.0	10.0
24-34	86	71.7	71.7	81.7
35-44	22	18.3	18.3	100.0
Total	120	100.0	100.0	

Regarding age distribution, the majority of participants fell within the 24-34 age range, constituting 71.7% of the sample. Meanwhile, 10.0% were aged 18-24, and 18.3% were aged 35-44.

Table 2:

Education Status

Education Status				
	Frequency	Percent	Valid Percent	Cumulative Percent
Advanced Level	38	31.7	31.7	31.7
Bachelor's Degree	23	19.2	19.2	50.8
Diploma / Higher Diploma	21	17.5	17.5	68.3
Ordinary Level	38	31.7	31.7	100.0
Total	120	100.0	100.0	

The education status distribution of the sample shows that respondents are fairly evenly split between those with Advanced Level and Ordinary Level qualifications (each 31.7%), while fewer possess bachelor's Degrees (19.2%) or Diplomas/Higher Diplomas (17.5%).

Table 3
Work Experience

Work Experience				
	Frequency	Percent	Valid Percent	Cumulative Percent
< 1 year	14	11.7	11.7	11.7
> 10 years	22	18.3	18.3	30.0
1 - 2 years	15	12.5	12.5	42.5
2-5 years	55	45.8	45.8	88.3
5-10 years	14	11.7	11.7	100.0
Total	120	100.0	100.0	

The majority (45.8%) reported having 2-5 years of work experience, followed by 18.3% with over 10 years of experience. Meanwhile, 12.5% reported 1-2 years of experience, with similar percentages for those with less than one year (11.7%) and 5-10 years (11.7%) of experience.

Table 4
Descriptive

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Marital Status	120	1.00	5.00	3.9500	.69331	-1.402	.221	4.773	.438
Labour Force	120	1.00	5.00	4.0021	.71706	-1.427	.221	4.058	.438
Valid N (leastwise)	120								

The result of the above analysis of the collected data shows that, for marital

status, the mean is nearly 3. Thus, the mean is 95 and the standard deviation is 0.69331. The skewness coefficient of -1.402 also points to a negative skewness. As for labour force participation, thus, the mean value is a little less than 4.2 (22), with 0 is the standard deviation. While 0 is the standard deviation. 71706. Similar to marital status, the minimum value is 1 for the level of education profiled for the study. A characteristic of this distribution is a high kurtosis value, with 4. The digit 0.58 shows high sensitivity in the distribution, as indicated by marital status, and hence, the distribution has thicker tails, making it leptokurtic.

Table 5*Case processing summary*

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Labour Force * Marital Status	120	100.0%	0	0.0%	120	100.0%

Table 6*Chi Square Test*

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	217.402 ^a	120	.000
Likelihood Ratio	130.513	120	.030
Linear-by-Linear Association	10.832	1	.001
N of Valid Cases	120		
a. 139 cells (97.2%) have an expected count of less than 5. The minimum expected count is .01.			

The Chi-Square Test of independence of labour force participation and marital status is shown in Table 6. The Pearson Chi-Square value is 217.402 with 120 degrees of freedom the test is statistically significant at $p < 0.001$ level which implies that their a significant relationship between marital status and labour force participation among the women sample.

Conclusion and Recommendations

As depicted in the analysis, this study establishes a strong hypothesis at $p < 0.05$ between the marital status and labour force participation of women within Pothuhera. The Pearson Chi-Square test we conducted was also evidenced by a p-value of less than 0.001, thus implying that marital status could be. The likelihood ratio test, which is 0.030, also concurs with this assertion, and these findings trend positively in all analyzed statistical measures.

Hence, although this study does present an argument that marital status influences labour force attachment, the research should be extended in the future to overcome the current shortcomings identified through the adoption of a higher population base, or using other analytical techniques. It would contribute to replicating these results and deepening the understanding of how marital status influences women's employment in the labour market from another perspective.

References

Araki, T. (2005). Corporate governance reforms, labour law developments, and the future of Japan's practice-dependent stakeholder model.

Bandura, A. (2018). Toward a psychology of human agency: Pathways and reflections. *Perspectives on Psychological Science*, 13(2), 130–136.

Cattell, R. B. (1978). *The scientific use of factor analysis in behavioural and life sciences*. New York: Plenum.

Dev, R., & Adhikari. (2005). National factors and employment relations in Japan.

George, A. S., Hovan, et al. (2022). Sri Lanka's economic crisis: A brief overview. *Partners Universal International Research Journal*, 1(2), 9–19.

Pramanik, S., et al. (2021). *Multidisciplinary approach to modern digital steganography*. Hershey, PA: Information Science Reference, an imprint of IGI Global.

Rahman, M. M., & Akhter, B. (2021). The impact of investment in human capital on bank performance: Evidence from Bangladesh. *Future Business Journal*, 7(1).

Schuler, R. S., et al. (2011). Global talent management and global talent challenges: Strategic opportunities for IHRM. *Journal of World Business*, 46(4), 506–516.

THE ROLE OF NON-GOVERNMENTAL ORGANISATIONS IN SUPPORTING SMALLHOLDER FARMERS TO ENHANCE FOOD SECURITY DURING ECONOMIC CRISES: A CASE STUDY OF VAVUNIYĀ DISTRICT

N. Sathyaruban^{1*}, A. Abhayaratne²

^{1, 2}*Postgraduate Institute of Humanities and Social Sciences, University of Peradeniya, Sri Lanka*

Abstract

The recent economic crisis had a significant impact on the nation's agriculture sector, prompting the government and non-governmental organisations to implement mitigating initiatives. The study aimed to identify factors affecting household food security during the economic crisis. A quasi-experimental approach was utilised, with 150 households selected through cluster sampling, with data collected via interviews and focus group discussions. The farmers who received the support have higher food security status (31%) than those who were not supported by NGOs. Results showed that family size ($p<0.05$), affected by economic crisis ($p<0.1$), and drought ($p<0.05$) had negative effects, while cultivated land size ($p<0.05$), assistance supported by NGOs ($p<0.1$), and income diversification ($p<0.05$) had positive effects on household food security. Despite being affected by the economic crisis, support from NGOs and practical applications in the field were found to increase household food security status. The study suggested key recommendations, such as expanding farmers' in-kind support and promoting smart agriculture, including various livelihood initiatives.

Keywords: *Non-Government Organizations, Food Security, Economic Crisis, Livelihood, In-Kind Support*

*Corresponding author: sathya2975@gmail.com

Introduction

Sri Lanka relies heavily on agriculture as the main source of income for the majority of its rural population, contributing 14-15% to its GDP. However, since 2022, the country has been facing severe economic difficulties, including mismanagement, high foreign debt, and declining foreign reserves, which have adversely affected over two million farmers and led to a drop in food production (Hovan et al., 2022).

A household food security survey conducted by the World Food Programme (WFP) in August 2022 found that 37% of households in Sri Lanka are food insecure, with 79% of households adopting food-based coping strategies (WFP, 2022). These findings underscore the critical food security challenges facing the country.

In this context, the role of NGOs supporting smallholder farmers in Sri Lanka remains underexplored. While there is extensive literature on NGO interventions, there is limited research specifically focusing on how NGOs assist farmers during economic crises, particularly in enhancing food security. Also, there is a lack of empirical evidence on the specific strategies used by NGOs to help farmers during economic downturns, the effectiveness and sustainability of these interventions, and how NGOs interact with local farming communities. This research aims to address these gaps by exploring the role of NGOs in supporting smallholder farmers in the Vavuniya district during the recession and assessing their impact on household food security.

Material and Methods

Data collection for the study involved conducting household interviews using structured questionnaires in the research area, covering topics like household demographics, livelihood, income, food consumption, expenditure, food assistance, and coping strategies. The research design utilized a quasi-experimental method, with cluster sampling employed to select 150 households for the study, divided into an intervention group receiving NGO assistance and a controlled group without any external support.

Measuring Household Food Security

The data were analysed, and the food security of the households was determined using the Consolidated Approach for Reporting Indicators of Food Security (CARI) with four descriptive categories: food secure, marginally food secure, moderately food insecure, and severely food insecure.

Logit Regression Model

The logit model was employed to estimate the factors that influence food security in households. The following describes the link between the food security status variable Y_i and its determinants X_i :

$$Y_i = \beta X_i + \mu_i \dots \dots \dots \text{equation 1}$$

$$Y_i = 1 \text{ for } X_i > 0 \text{ otherwise } i = 1, 2, 3 \dots \dots n$$

X_i is a vector of explanatory variables and $\hat{\alpha}$ is the vector of parameters.

When the household has food security, the non-linear variable is one; otherwise, it is zero. The logit model uses this information to produce a maximum likelihood estimation of β .

$$FSS = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + U \dots \dots \dots$$

Where,

FSS = Food security status

β_0 = Constant

X_1 = Age of household head (years)

X_2 = Sex of household head (Male=1: Female=0).

X_3 = Household size (number)

X_4 = Number of livelihood activities (Number)

X_5 = Consistent of supported livelihood initiatives (Yes=1, No=0)

X_6 = Total annual income of the household (Number)

X_7 = Farmland size (Ha)

X_8 = Remittance (1= if they receive in cash or kind. 0 = otherwise)

X_9 = Affected by economic crisis (Yes=1, No=0)

U = Error term

Results and Discussion

A survey interviewed 62% of females and 38% of males in the Vavuniya district and the results show that the majority of households (68%) were engaged in smallholder agriculture farming. This was followed by unskilled labour (22%), livestock rearing (8%), petty trade (7%), and skilled labour

(5%). The study also revealed that NGOs provided support in the form of fertilizer (35%), drip irrigation (38%), seeds and seedlings (22%), and agriculture tools (38%) to the rural farmers.

Status of Food Security of the Households

The results show that in the intervention group, 31% of households encounter severe and moderate food insecurity, while the control group has a higher percentage of 38% experiencing severe food insecurity. Moreover, 39% of households in the intervention group are marginally food secure, compared to a slightly higher percentage of 42% in the control group. Finally, 30% and 20% of households are classified as food secure in each group, respectively.

Food-Based Coping Strategies

The findings indicate that the control group exhibited higher utilization of coping strategies compared to the intervention group. Within the control group, 62% resorted to food-based coping strategies, with 52% opting for less preferred food, 44% limiting portion sizes, 31% reducing the number of meals, 36% borrowing money from a lender, 26% reducing spending for education and health, and 22% depleting savings.

Regression Analysis

Analysis of logistic regression showed that family size, affected by economic crisis, and drought had negative effects, while cultivated land size, assistance supported by NGOs, and income diversification had positive effects on household food security.

Table 1:

Result of Logit Regression for the Determinants of Household Food Security in Study Area

Variable	Intervention Group				Control Group			
	Coefficient	Std. Error	z-Statistic	P-value	Coefficient	Std. Error	z-Statistic	P-value
Family Size	-0.15633	0.07805	-2.11541*	0.016	0.14524	0.08804	3.11541	0.316
Diverse income source	0.63448	0.30838	2.02105*	0.021	0.5328	0.41838	3.01103	0.431
Assistance received from NGOs	0.34953	0.08909	3.92338**	0.000	0.55983	0.18706	4.52311	0.521
Drought	0.52436	0.24847	-2.02100*	0.033	0.53421	0.33451	3.20123	0.441

Remittance	0.00166	0.00070	2.48647*	0.006	0.02451	0.0212 3	3.256 11	0.325
Affected by economic crisis	-0.14523	0.06704	-2.10342*	0.014	0.13234	3.2144 5	3.103 21	0.467
Years of experience	0.07123	0.03232	1.03100*	0.042*	0.02345	1.1234 5	1.239 12	0.621
C	3.124208	1.36157	1.42624	0.036				

Note: *, ** Significant at 5 and 1%

Conclusion and Recommendations

The study examines the impact of NGO assistance on smallholder farmers and its link to food security in rural households during economic crises. It reveals that households lacking support struggle with food production and consumption, while those receiving NGOs' assistance had higher levels of food production and food security. In response to food shortages, households employ coping mechanisms such as consuming less preferred foods and reducing portion sizes. The timely adoption of possible agricultural practices, tangible support for cultivation, and various agriculture-based income-generating initiatives are essential for addressing household food insecurity.

References

- Ganiyu, M. O., & Omotayo, A. O. (2016). Effects of livelihood activities on the households' food security in the Ogbomoso South Local Government Area of Oyo State, Nigeria. *Journal of Agricultural Science and Environment*.
- Hovan, A. S. G., George, A. S., & Baskar, T. (2022). Sri Lanka's economic crisis: A brief overview. *Partners Universal International Research Journal*, 1(2), 9–19. Retrieved from <https://www.puirj.com>
- Olarinde, L., & Kuponiyi, F. (2005). Rural livelihood and food consumption patterns among households in Oyo State, Nigeria.
- World Food Programme. (2021). *Technical guidance for WFP consolidated approach for reporting indicators of food security (CARI)*. Assessment and Monitoring Division, Parco de' Medici 00148, Rome, Italy.
- World Food Programme. (2022). *Food security assessment: Sri Lanka*. Retrieved from <https://www.wfp.org/publications>
- World Food Programme. (2023). *Household food security overview – Sri Lanka*. Retrieved from <https://www.wfp.org/publications/household-food-security-overview-2023-sri-lanka>

THE DIFFERENCE IN RELIABILITY AND SOCIO-ECONOMIC BEHAVIOUR ON AGRO-MET ADVISORIES OF FARMER COMMUNITIES IN THE DRY ZONE OF SRI LANKA

W.I.U. Warnakulasooriya^{1*}, E.I.E. Sulochana² and M.M. Liyanage³

¹*Sri Lanka Red Cross Society, Climate Resilient Integrated Water Management Project*

^{2,3}*United Nations Development Programme, Climate Resilient Integrated Water Management Project*

Abstract

A study was conducted to assess the current state of agrometeorology and weather advisories. It was attempted to examine the reliability of the farming community in this regard, including the gaps in the dissemination of advisories and whether there is a difference in the adaptation of those who use it. The community that introduced agro-meteorological forecasting and used it with confidence experienced positive results and saw a change in their socio-economic behaviour along with an improvement in their standard of living. However, the communities that rejected the agro-meteorological forecast did not see any progress in their living conditions, and their crop production was also lower. Therefore, through the study, people who are interested in modern agricultural technology should contribute to agriculture. It suggests an appropriate agrometeorological advisory and information system for stakeholders to facilitate field-level decision-making among vulnerable groups and identify impacts on community socio-economic behaviour.

Keywords: *Adaptation, Agro-Met Advisories, Crop Production, Dry Zone and Weather*

*Correspondence author: Tel: +94716037663; E-mail:

ujithawarnakulasooriya@gmail.com; <https://orcid.org/0000-0003-4988-6669>

Introduction

The Dry Zone, encompassing approximately two-thirds of Sri Lanka (Ranagalage et al., 2020), plays a critical role in the country's agricultural production. This region is characterized by a distinct dry season and is prone to extreme weather events, conditions that are further exacerbated by the effects of climate change (Panabokke & Punyawardena, 2010). Effective weather forecasting in this area is of paramount importance, as it can significantly influence farming decisions, impacting both crop yields and the livelihoods of farmers (Kandegama, Rathnayake, Baig, & Behnassi, 2022).

Recognizing the crucial role of weather advisories in agricultural productivity, a comprehensive study was conducted to assess the current state of agrometeorology and the dissemination of weather advisories in Sri Lanka's Dry Zone.

Objective

The study, in collaboration with the Department of Agriculture (DoA), the Department of Meteorology (DoM), and the Center for Natural Resource Management, aims to evaluate the effectiveness of agro-meteorological advisories among farming communities in Sri Lanka's Dry Zone. Specifically, it investigates farmers' understanding and trust in weather forecasts, identifying gaps in dissemination and examining how these advisories influence agricultural practices and resilience against climate-related challenges. This collaborative effort seeks to bridge the information gap by assessing the adoption rates of agro-met advisories and analysing the socio-economic factors that impact their use, such as age, education, and past farming experience.

The objective is to develop a robust agrometeorological advisory and information system to empower stakeholders and provide field-level decision support, especially for vulnerable groups. By identifying factors influencing the acceptance of weather forecasts, this study intends to promote informed farming decisions and support sustainable agriculture in the region. The findings will provide insights into the benefits of agro-meteorological forecasting, encouraging the implementation of new technologies to improve crop productivity and farmers' quality of life while building climate resilience.

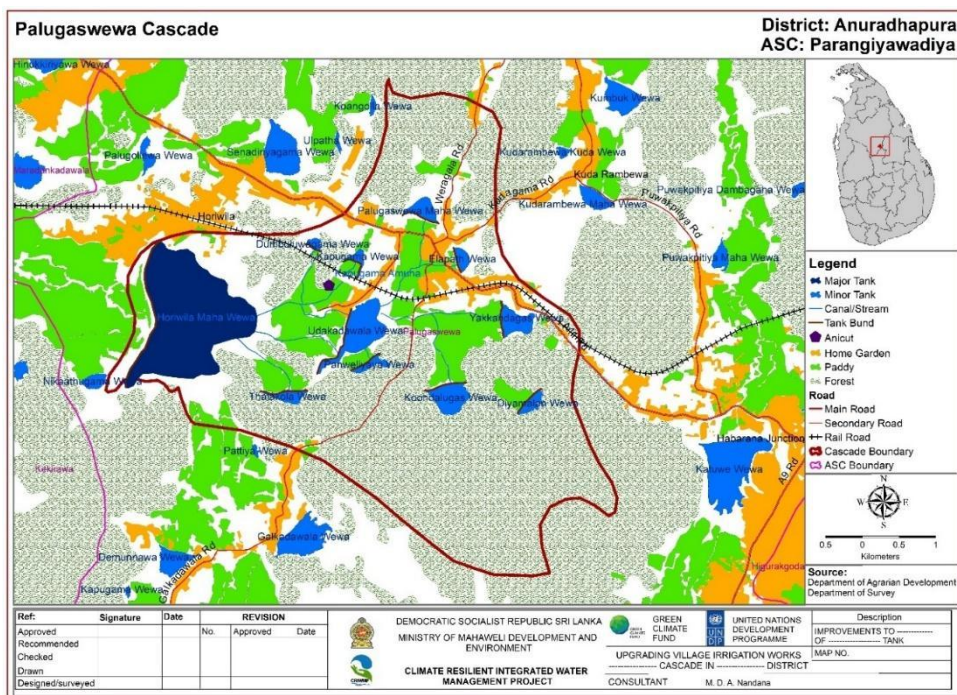
Material and Methods

The study is conducted in the Palugaswewa cascade in the Anuradhapura district, Sri Lanka. The cascade represents the 2 Grama Niladhari divisions, namely Palugaswewa GN and Horivila GN (Wijeratne & Piyadasa, 2014). In

the Palugaswewa divisional secretariat division. The study area falls under the agro-ecological zone of DL1b, and the main soil type is reddish-brown earth (Ministry of Agriculture & FAO, 2017). The Climate Resilience Integrated Water Management Project (CRIWMP) is being implemented under the Ministry of Irrigation and technical assistance of the United Nations Development Program (Imbulana et al., 2023). The project was capacity building of 3 farmers' organisations and communities for the application of agro-met advisories and weather forecasts for their crop production and ground-level government officers for dissemination and technical assistance for the farmers for their decision-making process (Premaratne, Senaratne, & Gunaratne, 2021).

Figure 1:

A Diagrammatic Representation of The Palugaswewa Cascade System



Source: CRIWMP

A Preliminary questionnaire survey was conducted to represent the community in Cascade. There are 85 farmers and 15 officers who were interviewed. Furthermore, focus group discussions were conducted with the 3 farmers' organisations. These tools were used to gather information on the perception of the forecast on crop production. Descriptive statistics data analysis was used to identify the factors affecting the adoption of weather forecasts.

Results and Discussion

Table 1:

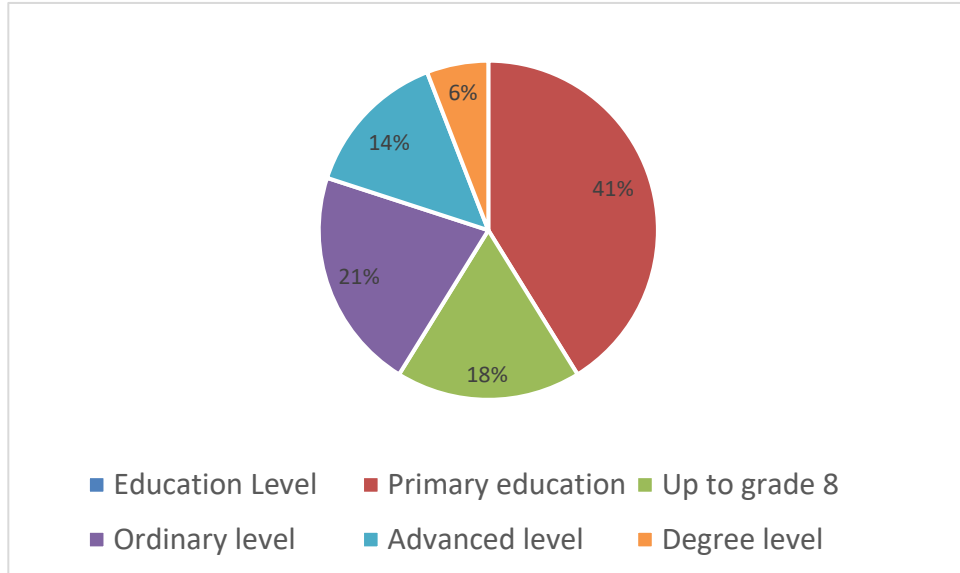
Descriptive Analysis of Survey Data: Age Level

Age Group	Male	Female	Total no of responded	Percentage
26-35	5	0	5	5.88%
36-45	8	4	12	14.12%
46-55	11	9	20	23.53%
56-65	25	8	33	38.82%
66-75	13	2	15	17.65%

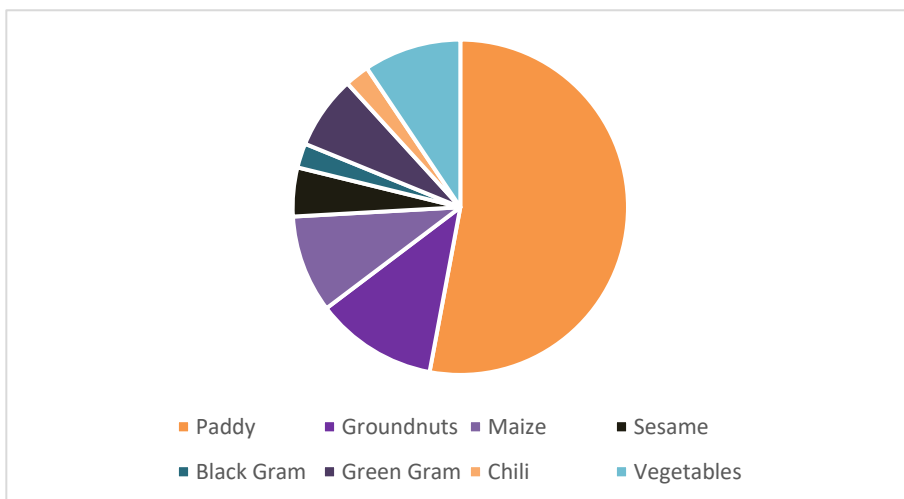
The findings revealed that farmers who integrated agro-meteorological forecasting into their planning experienced positive outcomes. Gender, age, and education are important variables for decision-making at the ground level. According to descriptive analysis of survey data, the least percentage (5.88%) of respondents were farmers in the age group of 26–35, and the highest percentage (38.82%) of respondents were those in the age group of 56–65.

Figure 2:

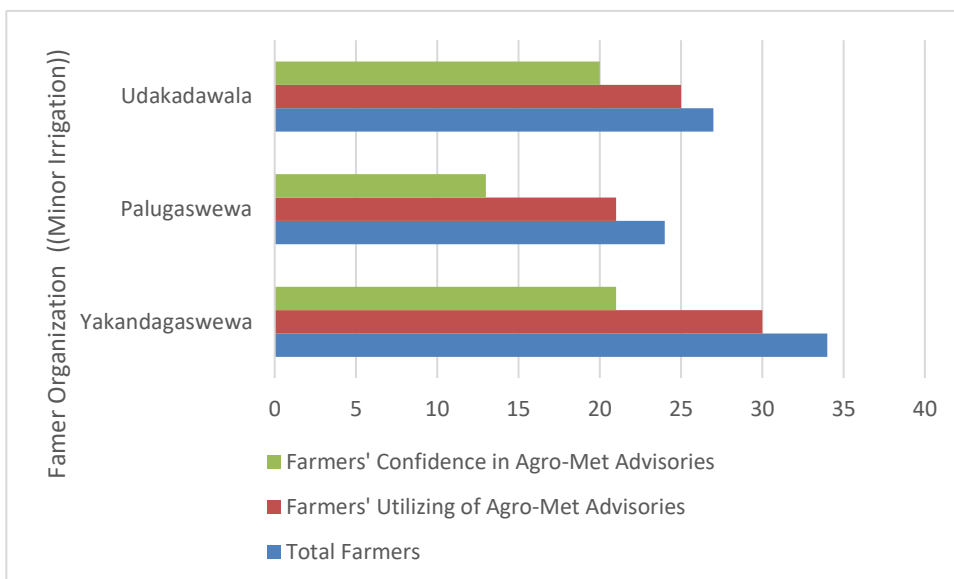
Descriptive Analysis of Survey Data: Education Level



When considering education, the majority have primary education qualifications, while only 6% have graduate qualifications.

Figure 3:*Descriptive Analysis of Survey Data: Cultivated Crops*

The survey results showed that the major crop cultivated in this area is paddy. In addition, they cultivate groundnuts, maize, sesame, black gram, green gram, chili, and vegetables. Most of them engage in subsistence agriculture, and a few engage in farming commercial ventures.

Figure 4:*Descriptive Analysis of Survey Data: Utilisation and Confident of Agro-Meteorological Advisories by Farmer Organisations*

This bar chart provides insights into the use and confidence levels in agro-

meteorological advisories among farmers in three minor irrigation farmer organizations: Udakadawala, Palugaswewa, and Yakandagaswewa. The data is presented in three distinct categories: Farmers' Confidence in Agro-Met Advisories (gray bars), Farmers' Utilization of Agro-Met Advisories (orange bars), and Total Farmers (blue bars) for each organization. These categories illustrate the number of farmers who trust the advisories, actively use them, and the total farmer count within each organization, respectively. The figure highlights the varying degrees of engagement with agro-met advisories among the different groups.

In comparing the organizations, Yakandagaswewa stands out with the highest utilisation rate, suggesting that farmers here are more proactive in applying the advisories, despite showing only moderate confidence levels. Udakadawala has the highest total number of farmers, with moderate levels of confidence and utilisation, indicating a balanced but less enthusiastic approach compared to Yakandagaswewa. Palugaswewa exhibits similar but slightly lower levels of confidence and utilisation than Udakadawala. This data underscores the differences in advisory trust and application among the organisations, potentially pointing to factors influencing each group's engagement with agro-meteorological information.

These farmers reported changes in their socio-economic behaviour and an improvement in their standard of living. The majority of respondents adapted their crop production activities based on weather forecasts, as opposed to relying solely on past experiences. In contrast, communities that rejected agro-meteorological forecasts did not observe any significant progress in their living conditions or crop production levels.

The study revealed that farmers who incorporated agro-meteorological advisories into their crop planning experienced positive outcomes, including improved crop yields and enhanced socio-economic conditions. Gender, age, and education levels were identified as key factors influencing farmers' decision-making. Older farmers, particularly those aged 56-65, were more likely to adopt these forecasts, while younger farmers showed less engagement. The majority of the respondents, who primarily cultivated paddy, adapted their farming practices based on weather forecasts. In contrast, communities that did not use the forecasts observed limited progress in crop production and socio-economic improvement, underscoring the importance of promoting modern agricultural technologies in the region.

Focus Group Discussions Results

The focus group discussions revealed that agro-meteorological advisories

significantly contributed to minimising crop damage by allowing farmers to anticipate and mitigate potential weather impacts. By adopting these advisories, farmers could better plan their crop cycles and respond to adverse conditions, ultimately reducing the risk of crop loss. This proactive approach proved essential, particularly in seasons with unpredictable weather patterns, where farmers could adjust their activities based on the forecasts, thereby safeguarding their crops and enhancing overall resilience against extreme weather events.

Additionally, the use of weather advisories enabled farmers to expand the cultivated area during the *Yala* season, with some even able to plant a third crop season. Enhanced water management practices, informed by timely weather forecasts, allowed for better resource allocation and irrigation scheduling, which supported increased crop production. This not only optimized water usage but also minimised conflicts over limited water resources, contributing to a more cooperative farming community. Consequently, farmers noted improved land utilisation and an expanded cropping calendar, reflecting a more robust agricultural system.

The advisories also contributed to increased yields and income, directly benefiting farmers' livelihoods. With improved crop management, yields saw a substantial increase, translating into higher earnings for farmers. The additional income facilitated better living conditions and reinforced the community's interest in continuing to utilise agro-meteorological advisories. The discussions highlighted the transformative potential of these advisories in bolstering economic stability, supporting sustainable agricultural practices, and fostering a more resilient farming community.

Conclusion and Recommendations

The study demonstrated that agro-meteorological advisories have a substantial positive impact on the farming communities in Sri Lanka's Dry Zone, particularly among those who incorporated them into their agricultural practices. Farmers who adopted these forecasts reported notable improvements in both crop yields and socioeconomic conditions, highlighting the practicality and benefits of integrating weather forecasts into their decision-making processes. The analysis also showed that factors like age, education, and gender play crucial roles in the likelihood of adopting these advisories, with older, more educated farmers showing higher adoption rates. Conversely, communities that disregarded these advisories saw limited progress in agricultural productivity and overall living standards, emphasising the advisories' role in fostering climate resilience and agricultural

sustainability.

The disparities in adoption rates and the varied impact on different farmer demographics underscore the necessity of targeted interventions to increase the reach and effectiveness of agro-meteorological advisories. The findings emphasise that promoting such modern agricultural technologies, especially in regions susceptible to climate change and extreme weather events, is essential for achieving sustainable agricultural practices and supporting vulnerable communities. Enhanced dissemination of these advisories could transform farming methods across the region, reducing risks associated with weather variability and bolstering the long-term resilience of these farming communities.

To improve the adoption and effectiveness of agro-meteorological advisories, the establishment of a robust and accessible advisory and information system tailored to the needs of Sri Lanka's Dry Zone farming communities is recommended. This system should focus on building the capacity of farmers and local agricultural officers through training programs and technical support, enabling more informed decisions and greater resilience against climate challenges. Increased accessibility to these advisories through digital platforms and local outreach programs can further encourage their use, making modern agricultural technology a viable tool for a wider range of farmers, regardless of education or age.

Additionally, educational initiatives aimed at raising awareness of the advisories' benefits can play a vital role in fostering acceptance and proactive usage among farmers. Developing partnerships with local government agencies and agricultural extension programs will help ensure consistent support for these communities. These targeted interventions are vital not only for enhancing crop productivity and economic stability but also for promoting sustainable agricultural practices and strengthening the climate resilience of farming communities in the Dry Zone.

References

- de Silva, C., & Nawala, N. (2009). Climate change effects on the north-east monsoon and dry zone agriculture in Sri Lanka. *Global Climate Change and Its Impacts on Agriculture, Forestry and Water in the Tropics*, 32.
- Imbulana, U., Amarasinghe, U. A., Ukwattage, S., Amarnath, G., Chandrasekara, S., Sivananthan, P., & Seelanatha, K. (2023). Institutional mapping of adaptation options in Malwathu Oya, Yan Oya and Mi Oya river basins in Sri Lanka.

Kandegama, W., Rathnayake, R., Baig, M., & Behnassi, M. (2022). Impacts of climate change on horticultural crop production in Sri Lanka and the potential of climate-smart agriculture in enhancing food security and resilience. In *Food Security and Climate-Smart Food Systems: Building Resilience for the Global South* (pp. 67–97). Cham: Springer International Publishing.

Ministry of Agriculture, S. L., & FAO. (2017). *A proposal for declaration as a GIHAS the Cascade Tank Village System (CTVS) in the dry zone of Sri Lanka*.

Panabokke, C., & Punyawardena, B. (2010). Climate change and rain-fed agriculture in the dry zone of Sri Lanka.

Premarathne, N., Senaratne, A., & Gunaratne, L. (2021). Use of weather information by Sri Lankan paddy farmers: An application of the theory of planned behaviour.

Ranagalage, M., Gunarathna, M., Surasinghe, T., Dissanayake, D., Simwanda, M., Murayama, Y., & Sathurusinghe, A. (2020). Multi-decadal forest-cover dynamics in the tropical realm: Past trends and policy insights for forest conservation in the dry zone of Sri Lanka. *Forests*, 11(8), 836.

Wijeratne, V., & Piyadasa, R. (2014). Identification of spatial distribution and issues related to groundwater quality in Palugaswewa DS Division in Anuradhapura District. In *Symposium Proceedings of the Water Professionals' Day, Water Resources Research in Sri Lanka, Cap-Net Lanka, Postgraduate Institute of Agriculture and Geo-Informatics Society of Sri Lanka in collaboration with United Nations Development Programme* (p. 102).

EXPLORATION OF SOCIO-ECONOMIC, CULTURAL, AND PSYCHOLOGICAL INFLUENCES ON FASHION PREFERENCES AMONG YOUNG ADULTS IN SRI LANKA (WITH SPECIAL REFERENCE TO COLOMBO DISTRICT)

K.W.A. Shanahara^{1*}, H.M.S. Priyanath²

^{1, 2} Department of Economics and Statistics, Faculty of Social Sciences and Languages,
Sabaragamuwa University of Sri Lanka

Abstract

This study aimed to investigate the factors influencing fashion preferences among young adults in Sri Lanka. The study employed a convergent parallel mixed method, surveyed 105 young adults aged 18-30, and conducted qualitative interviews with 24 young adults. The results revealed significant positive relationships between socioeconomic factors, cultural factors, psychological factors, and fashion preferences. Psychological factors had the strongest influence on fashion preferences, followed by cultural and socioeconomic factors. Cultural backgrounds, including traditional practices and religious beliefs, along with global influences such as international trends and social media, play pivotal roles. Brand loyalty and trend-following behaviour are prominent, reflecting participants' attachment to specific brands and their desire to stay current. Such findings provide vital information into the fashion consumption of Sri Lankan young adults thereby giving direction for targeted marketing sustainable practices and consumer education initiatives.

Keywords: *Cultural Factors, Fashion Preferences, Psychological Factors, Socio-Economic Factors, Young Adults*

*Corresponding author: Tel.: +94 (76) 268 2523; Email: ashanahara1@gmail.com

Introduction

The fashion preferences of young adults are shaped by socio-economic status, cultural influences, and psychological traits. While research exists globally, studies on Sri Lankan fashion choices are limited. This study aims to fill this gap by examining factors affecting fashion preferences among young adults.

The objectives are:

1. To explore the impact of socio-economic status on fashion preferences.
2. To investigate the influence of cultural values on fashion decisions.
3. To determine associations between psychological traits and fashion choices.

By addressing these objectives, this research contributes to the development of a customer-centric, sustainable fashion industry in Sri Lanka.

Material and Methods

A convergent parallel mixed method research design was adopted, blending qualitative and quantitative approaches. Independent variables were derived using composite scores from validated Likert scale questions, with internal consistency confirmed by Cronbach's Alpha. The study surveyed 105 young adults aged 18-30 from the Colombo district, selected through convenience sampling.

To ensure validity, multicollinearity was tested using the Variance Inflation Factor (VIF), with all values below 3, indicating acceptable levels of correlation among the variables. Additionally, qualitative data was collected from 24 semi-structured interviews and analysed using Braun and Clarke's (2006) six-phase thematic analysis.

Results and Discussion

Quantitative Analysis

Demographic Analysis

The sample comprised 105 young adults, predominantly aged 18-25, with 58.1% in the 24-25 age group. The majority (70.5%) were female, and 52.4% held a bachelor's degree. Over half of the respondents (51.4%) were students, while 22.9% were employed full-time. These demographics suggest a highly educated, predominantly female population, reflecting urban young adults from the Colombo district.

Descriptive Analysis

Descriptive statistics were employed to analyse the dependent variable (Fashion Preferences) and the independent variables (Socio-economic status, Cultural Factors, and Psychological Factors). Table 1 presents the descriptive statistics for these variables. The mean scores for all variables fell within the range of $3.5 < X \leq 5$, indicating a high level of influence on fashion preferences among young adults. Psychological factors had the highest mean score (3.8638), confirming their dominant role in shaping fashion preferences.

Table 1:

Statistics

		Statistics			
		SF	CF	PF	FP
N	Valid	105	105	105	105
	Missing	0	0	0	0
Mean		3.6790	3.7333	3.8638	3.7071
Median		3.7000	3.7500	3.9000	3.7500
Std. Deviation		.52011	.59269	.53907	.52043
Variance		.271	.351	.291	.271
Minimum		1.00	1.00	1.10	1.00
Maximum		4.80	5.00	5.00	5.00

Source: Survey data, 2024

Correlation

Pearson correlation coefficients indicated strong positive relationships among all variables, significant at the 0.01 level. Table 2 presents the correlation matrix.

Table 2:

Correlations

		SF	CF	PF	FP
SF	Pearson Correlation	1	.779**	.721**	.744**
	Sig. (2-tailed)		.000	.000	.000
	N	105	105	105	105
CF	Pearson Correlation	.779**	1	.744**	.757**
	Sig. (2-tailed)	.000		.000	.000
	N	105	105	105	105
PF	Pearson Correlation	.721**	.744**	1	.747**
	Sig. (2-tailed)	.000	.000		.000
	N	105	105	105	105
FP	Pearson Correlation	.744**	.757**	.747**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	105	105	105	105

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Survey data, (2024)

Regression

Multiple regression analysis indicated that socio-economic, cultural, and psychological factors collectively explained 67.5% of the variance in fashion preferences, with psychological factors having the greatest impact ($B = 0.315$, $p < 0.001$). The Variance Inflation Factor (VIF) test revealed that multicollinearity was not an issue, as all values were below 3, ensuring robust regression results. Table 3 presents the regression analysis results.

Table 3:
Regression Analysis

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.822 ^a	.675	.665	.30108		
a. Predictors: (Constant), PF, SF, CF						
Coefficients ^a						
Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.514	.227		2.270	.025
	SF	.271	.095	.275	2.861	.005
	CF	.263	.088	.300	3.006	.003
	PF	.315	.087	.326	3.614	.001
a. Dependent Variable: FP						

Source: Survey data, (2024)

Qualitative Analysis

The qualitative findings of this study offer rich insights into the cultural, psychological, and fashion preference factors influencing young adults' clothing choices in Sri Lanka. Thematic analysis revealed that cultural background, religious beliefs, adoption of international fashion trends, and geographic location significantly impact fashion preferences. These findings align with (Craig & Douglas, 2006; Hofstede, 1980), who emphasised the role of cultural institutions and regional aesthetics in fashion choices. Respondents' narratives highlighted complex negotiations of identity, modesty, and self-expression within cultural norms, echoing (Abraham & Barker, 2015). Psychological factors included self-identification as trend followers or setters, fashion trend awareness, brand loyalty, and mood influence, resonating with

(Shetty & Kotian, 2022), on personality traits in fashion consumption. The fashion preference themes identified in the interviews spanned style experimentation, recent purchases, budgeting, environmental considerations, and shopping channel preferences. These findings align with and extend previous research on young adults' fashion consumption patterns, such as the work of (Asare et al., 2016; Leung et al., 2015; Solino et al., 2020) on the role of perceived authenticity and uniqueness in shaping youth fashion choices.

Conclusion and Recommendations

The study concludes that fashion preferences among young adults are shaped by socio-economic status, cultural values, and psychological traits. Higher socio-economic status leads to greater fashion consciousness, cultural values influence aesthetics and modesty, and psychological traits like trendsetting and brand loyalty impact choices. Understanding these factors allows stakeholders to tailor fashion offerings, such as incorporating Sri Lankan crafts for cultural authenticity and marketing campaigns that celebrate diversity and individual expression.

References

Abraham, J., & Barker, K. (2015). Exploring gender difference in motivation, engagement and enrolment behaviour of senior secondary physics students in New South Wales. *Research in Science Education*, 45(1), 59–73. <https://doi.org/10.1007/S11165-014-9413-2>

Asare, T. O., Ibrahim, A.-F., & Kwesi, A. D. (2016). The influence of social and psychological factors on the selection of clothing among female students of Kumasi Polytechnic, Ghana. *International Journal of Engineering Research and Reviews*, 4. Retrieved from www.researchpublish.com

Pentina, I., Hancock, T., & Xie, T. (2023). Exploring relationship development with social chatbots: A mixed-method study of the replica. *Computers in Human Behavior*, 140. <https://doi.org/10.1016/j.chb.2022.107600>

Shetty, K. J., & Kotian, S. (2022). Psychological & social impact of fashion on young adolescents: Case study. *International Research Journal of Modernization in Engineering Technology and Science*. Retrieved from www.irjmets.com

Solino, L. J. S., Teixeira, B. M. de L., & Dantas, Í. J. de M. (2020). The sustainability in fashion: A systematic literature review on slow fashion.

International Journal for Innovation Education and Research, 8(10), 164–202. <https://doi.org/10.31686/ijer.vol8.iss10.2670>

THE NEXUS BETWEEN DIGITAL FINANCIAL INCLUSION AND FINANCIAL SECTOR DEVELOPMENT IN SRI LANKA

K.V.G.T. Devindi^{1*}, U.S. Thathsarani²

^{1, 2} *Department of Economics and Statistics, Faculty of Social Sciences and Languages, Sabaragamuwa University of Sri Lanka*

Abstract

In the digital transformation era, ensuring digital financial inclusion has become critical for fostering financial sector development, especially in the developing economies of Sri Lanka. This research examines the relationship between digital financial inclusion and financial sector development in Sri Lanka, applying an Autoregressive Distributed Lag model (ARDL) in EViews. This study mainly used secondary data, and we used time series data from 1990 to 2023. Yearly data is analysed, focusing on access, usage and quality. Findings confirmed that expanded access significantly enhanced financial sector growth through increased digital financial inclusion and improved quality, including consumer protection, positively impacting development. The results suggested that improvements in access led to substantial sectoral growth. Furthermore, the study revealed that the higher the interaction with digital financial inclusion the more efficiently the financial sector grew. These findings support the hypothesis that digital financial inclusion's access, usage, and quality levels are critical for financial sector development.

Keywords: *Digital Financial Inclusion, Financial Sector Development, Relationship, ARDL Model, Sri Lanka*

*Corresponding author: Tel.: +94 (76) 7809168; Email: kvgtdevindi29@gmail.com

Introduction

The usage of the financial sector through digital financial inclusion has become a strategic focus of the economic development agenda worldwide, impacting the advancement of the players in the financial industries. The increase in innovations driven by globalisation means that new forms of financial services have provided solutions for the delivery and access to improved finance, which boosts economic development (Demirguc-Kunt et al., 2019). As for the present research, the connection between the two concepts is considered between digital financial inclusion and Sri Lanka's financial sector development, which currently experiences the challenges and risks connected with digital finance. It has to do with delivering the basics of financial services and innovation efficiently, sustainably, securely, and in a manner relevant to user transactions, payments, savings, credit, and insurance for individuals and businesses (World Bank, 2020). Technology in digitally boosting the previously inaccessible areas of financial systems is a key feature of digital financial inclusion. It brings innovative solutions that increase the accessibility and productivity of financial services (Ozili, 2018). This technology for digital financial inclusion has benefits, including increasing access to financial markets, cutting the cost of the financial intermediary, making more established flexibility in electronic banking, encouraging competition, resultant employment opportunities and minimising financial fraudulence. For example, in a study by Gomber (et al., 2017). So, while attempts have been made to improve access to formal financial services in Sri Lanka, a huge portion of the adults remain still excluded from it (World Bank, 2022). They intend to update the conventional banking structures, support business ventures, and spur development (Thathsarani & Jianguo, 2022). Initiatives for financial inclusion in Sub-Saharan Africa include curbing unregulated financial services and improving access to capital while promoting investment and economic growth, due to poor financial inclusion in the region, high rates of inequality and poverty. Research on the relationship between financial inclusion and economic growth in sub-Saharan Africa is still ongoing (Jima & Makoni, 2023).

Material and Methods

The current study utilises quantitative types of data. Besides, this study mainly used secondary data and analysis with time series research design to examine the association between digital financial inclusion and financial sector development. Some of the primary data sources are the International Telecommunication Union Report, the Central Bank Report of Sri Lanka, the

International Monetary Report, the World Development Indicator and the Department of Census & Statistics Sri Lanka Report. This study uses the ARDL technique to analyse both short-run and long-run co-integrated relationships and, hence, gives a thorough analysis of the relationship between digital financial inclusion (DFI) and the financial sector of Sri Lanka. According to this study, the expected alternative hypotheses are as follows.

H1; Digital Financial Inclusion Access Impacts on the Financial Sector Development.

H2; Digital Financial Inclusion Usage Impacts on the Financial Sector Development.

H3; Digital Financial Inclusion Quality Impacts on the Financial Sector Development.

Results and Discussion

H1; Digital Financial Inclusion Access Impacts on the Financial Sector Development

X=Percentage of Population with Internet Access (INTA), Availability of Agent Network (AGENT),

Mobile Phone Presentation Rate (PENE_R)

Y = Number of ATMs for 100,000 Adults (ATM)

Variables	Pro: values
INTA	0.02076
AGENT	0.01231
PENE_R	0.00118

Y = Number of Bank Branches for 100,000 Adults (BANK_B)

Variables	Pro: values
INTA	0.23674
AGENT	0.01267
PENE_R	0.07396

Y = Ratio of Board Money to GDP (BOARD_M)

Variables	Pro: values
INTA	0.04110
AGENT	0.11961
PENE_R	0.02729

Y = Private Sector Credit to GDP (PSC)

Variables	Pro: values
INTA	0.01277
AGENT	0.02869
PENE_R	0.20688

Y = Financial Literacy Rate (FLR)

Variables	Pro: values
INTA	0.04814
AGENT	0.03678
PENE_R	0.061227

H2; Digital Financial Inclusion Usage Impacts on the Financial Sector Development.

X =Percentage of the Population with a Bank Account (BANK_A), Value of Digital Investments (D_INV),

Volume of Digital Transactions (D_TRANS)

Variables	Pro: values
BANK_A	0.03410
D_INV	0.04070
D_TRANS	0.09138

Variables	Pro: values
BANK_A	0.00001
D-INV	0.17984
D_TRANS	0.00661

Y = Number of ATMs for 100,000 Y = Financial Literacy Rate Adults (ATM) (FLR)

Y = Number of Bank Branches for Y = Private Sector Credit to 100,000 Adults (BANK_B)GDP (PSC)

Variables	Pro: values
BANK_A	0.05010
D_INV	0.43934
D_TRANS	0.01032

Variables	Pro: values
BANK_A	0.04853
D_INV	0.10112
D_TRANS	0.01165

Y = Ratio of Board Money to GDP (BOARD_M)

Variables	Pro: values
BANK_A	0.02498
D_INV	0.18713
D_TRANS	0.01006

H3; Digital Financial Inclusion Quality Impacts on the Financial Sector Development.

X= Consumer Protection Framework (CON_PRO)

Y = Number of ATMs for 100,000Y = Financial Literacy Rate Adults (ATM) (FLR)

Variables	Pro: value
CON_PRO	0.01169

Variables	Pro: value
CON_PRO	0.04642

Y = Number of Bank Branches for Y = Private Sector Credit to 100,000 Adults (BANK_B)GDP (PSC)

Variable	Pro: value
CON_PRO	0.01540

Variable	Pro: value
CON_PRO	0.08561

Y = Ratio of Board Money to GDP (BOARD_M)

Variable	Pro: value
CON_PRO	0.03171

Example for E Views output.

H1; Digital Financial Inclusion Access Impacts on the Financial Sector Development

Dependent Variable: ATM

Method: ARDL

Date: 04/21/24 Time: 08:22

Sample: 1994 2023

Included observations: 30

Dependent lags: 4 (Automatic)

Automatic-lag linear regressors (4 max. lags): INTA AGENT PENE_R

Deterministics: Restricted constant and no trend (Case 2)

Model selection method: Akaike info criterion (AIC)

Number of models evaluated: 500

Selected model: ARDL (4,0,3,4)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
ATM (-1)	0.787816...	0.1728845...	4.5568954...	0.00037...
ATM (-2)	0.045171...	0.1768793...	0.2553808...	0.80189...
ATM (-3)	0.135166...	0.1743220...	0.7753865...	0.45016...
ATM (-4)	0.182806...	0.1705506...	1.0718576...	0.30072...
INTA	-7.33453...	2.8389080...	-2.583576...	0.02076...
AGENT	-0.02646...	0.8424757...	-0.031414...	0.97535...
AGENT (-1)	0.182902...	1.0375441...	0.1762844...	0.86242...
AGENT (-2)	-0.62050...	1.0268274...	-0.604290...	0.55468...
AGENT (-3)	2.799116...	0.9842401...	2.8439363...	0.01231...
PENE_R	-4.53571...	2.4876829...	-1.823268...	0.08825...
PENE_R (-1)	8.730436...	4.0588724...	2.1509510...	0.04818...
PENE_R (-2)	-15.8562...	4.3114386...	-3.677709...	0.00223...
PENE_R (-3)	22.11555...	4.5399180...	4.8713560...	0.00020...
PENE_R (-4)	-11.8980...	2.9836584...	-3.987740...	0.00118...
C	-0.05754...	0.8894812...	-0.064692...	0.94927...
R-squared	0.992442...	Mean dependent var		12.6649
Adjusted R-squared	0.985389...	S.D. dependent var		5.65837

S.E. of regression	0.683953...	Akaike info criterion	2.384999
Sum squared resid	7.016890...	Schwarz criterion	3.085598
Log likelihood		-20.7749... Hannan-Quinn criteria	.2.6091
F-statistic	140.7036...	Durbin-Watson stat	2.82192
Prob(F-statistic)		2.686802...	

*Note: p-values and any subsequent test results do not account for model selection.

These findings indicate that banking sector indices are significantly affected by access to digital financial services. For example, the number of ATMs per 100,000 adults (0.04814) and the financial literacy rate (0.02076) are favourably correlated with the proportion of the population having internet access (INTA), and the number of bank branches (0.11961) is strongly correlated with mobile phone penetration (PENE_R). Metrics like digital investments (D_INV) and bank account ownership (BANK_A) also show significant positive associations with usage, with D_INV having a particularly strong effect on ATMs (0.18713) and financial literacy (0.17984). Finally, the consumer protection framework (CON_PRO) indicates that the quality of digital banking services has a favourable impact on every result that is looked at, particularly for values of 0.04642 for ATMs and 0.01169 for financial literacy. Enhancing access, usage, and quality of digital financial services is crucial for advancing the development of Sri Lanka's financial sector.

Conclusion and Recommendations

The detailed analysis of this study highlights the relationship between digital financial inclusion and enhancing financial sector development in Sri Lanka. Empirical findings indicate that quantitative proxies for DFI, such as bank branch density, private sector credit to GDP, agent networks, internet connectivity, and mobile money connectivity, positively influence the fintech sector. This demonstrates digital financial inclusion's crucial role in sector evolution. Regression analysis using the ARDL model reveals a strong correlation between the increased financial sector and the accessibility of digital financial services, with high coefficients for digital access and usage variables and robust model validation through adjusted R-squared, Durbin-Watson, and F-statistics.

Based on these results, several recommendations are proposed to harness the benefits of DFI. Policymakers and financial providers should enhance digital financial services by investing in internet infrastructure, agent banking, and

improving digital service penetration. Encouraging the usage of digital financial products through investments in digital payments, awareness programs, and educational initiatives is crucial. Efforts to spread financial literacy, highlighting the advantages and safe usage of digital financial services, should be intensified. Additionally, offering incentives for private sector involvement to improve service quality and innovation is recommended. Promoting partnerships between the government, financial service providers, telecom companies, and other stakeholders is vital to foster inclusivity.

References

- Gomber, P., Koch, J. A., & Siering, M. (2017). Digital finance and FinTech: Current research and future research directions. *Journal of Business Economics*, 537–580. Retrieved from <https://link.springer.com/article/10.1007/s11573-017-0852-x>
- Jima, M. D., & Makoni, P. L. (2023). Financial inclusion and economic growth in Sub-Saharan Africa. *Journal of Risk and Financial Management*. Retrieved from file:///C:/Users/pc/Documents/research/jrfm-16-00299.pdf
- Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. *Science Direct*, 329–340. Retrieved from <https://www.sciencedirect.com/science/article/pii/S2214845017301503>
- South Eastern University of Sri Lanka. (2023). The enhancement of FinTech on Islamic banking and financial sector in Sri Lanka. South Eastern University of Sri Lanka, University Park, Oluvil, Sri Lanka.
- Thathsarani, U. S., & Jianguo, W. (2022). Do digital finance and the technology acceptance model influence financial inclusion? *Information*. Retrieved from file:///C:/Users/pc/Documents/research/information-13-00390.pdf
- World Bank. (2017). World development report 2017: *Governance and the law*. Retrieved from <https://www.worldbank.org/en/publication/wdr2017>

TRACK 02
STATISTICS AND INFORMATION
TECHNOLOGY

PLENARY SPEECH

Promising Approaches for Real-world Solution Resiliency and Stability

Prof. Prasad M. Jayaweera
Faculty of Computing
University of Sri Jayewardenepura



Most solution approaches attempting to overcome present day real-world challenges have often been proven unsuccessful. These problematic encounters are inherently complex and need to be tackled with the consideration of manifold aspects of the concerned reality. However, when careful investigations are carried out on typical solution approaches, it is not that hard to conclude that they are either total failures or partly successful with respect only to some of the priority aspects considered. The reviews completed on related literature indicate appropriateness of going beyond not only multidisciplinary and interdisciplinarity, but prominently adopting transdisciplinary could guarantee promising approaches for solution success and solution stability. Although importance of transdisciplinary approaches was highlighted in literature, developers need to proper adoption such approaches for total solution success (UNESCO U. D., 1998).

In this theme talk, a sound and complete framework and a general solution approach have been proposed for promising solution resiliency and stability in handling real world problems. The proposed unified framework recommends integration of multiple aspects inclusive of Responsible, Inclusive, Sustainable, Knowledge and Open-Collaborative in devising solutions. Further stakeholder valued *Views Integrated (solution) Process* is to be adopted with the proposed unified framework.

The adoption of proposed unified framework and instantiations of VIP in devising solution approaches for real world problematic situations could guarantee mitigation of all associated risks with solution failures and their deficiencies in achieving total success.

Unified Framework for Transdisciplinary

The proposed unified framework is a hexa-dimensional frame of reference for stages covering Problem Awareness of Problems, Suggestion of Solutions, Development of Solution, Evaluation of Solution-Consequences and finally Conclusions of Solution as per recommended phases of the Design Science Research Methodology (AIS, 2009). Hexa-dimensional aspects of the

proposed framework are;

R -Responsible Research & Innovations

I-Inclusive development: Participatory, Citizen Science & Action Research

S -Sustainability Science

K -Indigenous Knowledge /Traditional Knowledge & Other (K) System Integration

and

O -Open Science & Open Innovation

C -Collaborative Adaptive Management

The first sub-framework of the proposed hexa-dimensional framework for solution approach is abbreviated as RISK. The very first and important dimension of RISK is all about promotion of socially responsible research and innovations (RRI). This is the need for complete comprehension and total commitment for social contract for science without any reservations as reported also in (LUBCHENCO, 1998). The second dimension is about yet another noneligible aspect, all-inclusive solution development. In this context fields of studies such as Citizen Science (CBC, 2021), Participatory Development (IAP, 2018) and Action Research (CARN, 2023) are with huge relevance. The third is Sustainability Science (Kajikawa, 2008) that different communities and solution developers have been discussing from years and also now amplified into seventeen goals as human targets for years to come by united nations (UN, 2023).

The last dimension of first sub-framework, RIKS of proposed hexa-dimensional framework for knowledge integration is all about integration of indigenous, traditional and other knowledge systems to understand and also when devising solutions. Integration of different knowledge systems for success were heavily discussed in various forums (WTO, 2023) and while highlighting importance of technology enabled protections (Jayaweera, 2013).

The second sub-framework of the proposed hexa-dimensional framework for solution approach is OC. The first dimension is about open study areas inclusive of Open Science and Open Innovation. The UNESCO ‘Recommendation on open science’ (UNESCO, 2023) has also stressed the necessity on ‘open engagement of societal actors’ and ‘open dialogue with other knowledge systems’ with science engagements. Further, recent developments in Open Innovations such as Live Lab (EN4LL, 2019) and RedHat Open Innovation Lab (RedHat, 2018) are commendable initiatives for the engagements and innovations of wider participants and all potential contributors. Finally, the last dimension, collaborative adaptive management where dynamic, flexible and adaptive approaches have been recommended for

development workflows guaranteeing solution success (MIT, n.d.).

Stakeholder Valued View Integrated Solution Process

The proposed VVIP approach consists of two parts. First, tackling multiple views during the analysis of problem domains as well as when understanding the expectation of solution domains by considering the complete spectrums of stakeholders. We propose following matrix-like illustrative metaphor (Figure 1) classifying stakeholders into two categories: Solution Developers/Contributors and Solution Users/Consumers. User concerns are to elicit and map with respective views of the solution developers paving a bridge between the two.

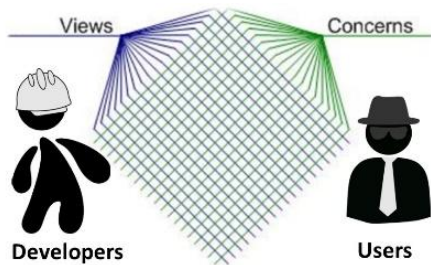


Figure 1 Multiple Views on User Concerns

Each and every cell of the matrix like metaphor is highly important and needs to be fulfilled as per the context within which problems are to be solved. Secondly, an approach has been proposed to complete these multiple views. The Last part of the VVIP solution approach is the multiple *Views Integrated Process*, i.e., a systematic approach that could be considered in adopting in any solution process. Here in line with Zachman's framework (Zachman, 2013), we are proposing solution development processes starting with motivations or goals designing followed by understanding and expression of targeted benefits by means of value propositions for instance. The final phase, appropriate adoption of benefits delivery means such appropriate specifications of business processes to be enacted through potential value networks (Nengmin Wang, 2022).

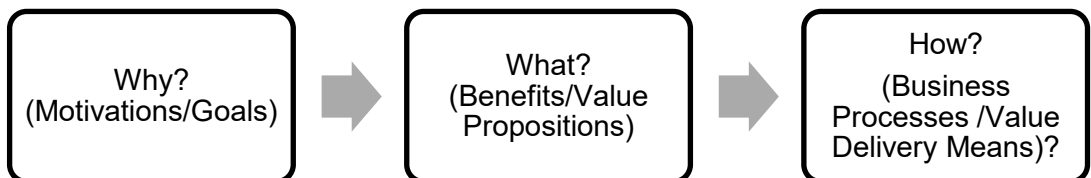


Figure 2 Solution Development Workflow

Concluding Remarks

The majority of present-day research adopts monodisciplinary or otherwise multidisciplinary approaches for solution developments in complex real-world problems. However, when tackling manifold and complex real-world issues it was observed failures and deficiencies in such devised solutions.

In order to overcome these challenges concerned communities facing, solution developers with expertise from different disciplines need to work together. These interdisciplinary and transdisciplinary approaches with facilitation for knowledge integrations and therefore inclusive solution development are promising solution success.

However, the unavailability of a sound and complete framework for Transdisciplinary and a Systematic approach to solution development is an area where much attention is needed. Therefore, in this work, the RISK-OC unification framework and VVIP solution approach have been proposed to fulfil this niche. RISK-OC is an open, citizen-centred framework for Knowledge Integration and Solution design. VVIP is an extended adoption of well-known multiple-view integrations in systematic and phase-wise solution developments. We are confident that RISK-OC and VVIP could deliver much promising solutions when tackling real-world complex issues.

References

- AIS. (2009, August). *Design Research Methodology*. Retrieved from Association for Information Systems: <https://aisnet.org/page/DesignResearchMethod>
- CARN. (2023). *The Collaborative Action Research Network*. Retrieved from LATEST UPDATES FROM CARN: <https://www.carn.org.uk/>
- CBC. (2021, August 13). *The controversy over the term 'citizen science'*. Retrieved from Science·What on Earth?: <https://www.cbc.ca/news/science/what-on-earth-citizen-science-community-1.6139049>
- EN4LL. (2019, July 26). *Living Lab Introduction*. Retrieved from European Network of Living Labs: <https://youtu.be/gu67-erX8as>
- IAP. (2018, May 9). *Public Participation Pillars*. Retrieved from International Association for Public Participation: https://cdn.ymaws.com/www.iap2.org/resource/resmgr/Communications/A3_P2_Pillars_brochure.pdf

Jayaweera, P. M. (2013, April 29-30). *Modern Technology and Protection of Traditional*. Retrieved from SAARC CULTURAL CENTRE: http://saarcculture.org/wp-content/uploads/2016/02/book-of-abstract_tktce.pdf

Kajikawa, Y. (2008, July 19). *Research core and framework of sustainability science*. Retrieved from Springer Link: <https://link.springer.com/article/10.1007/s11625-008-0053-1>

LUBCHENCO, J. (1998, January 23). *Entering the Century of the Environment: A New Social Contract for Science*. Retrieved from ENTERING THE CENTURY OF THE ENVIRONMENT: A NEW SOCIAL CONTRACT FOR SCIENCE: <https://www.science.org/doi/10.1126/science.279.5350.491>

RedHat. (2018, January 13). *Red Hat Open Innovation Labs*. Retrieved from We are open | Red Hat Open Innovation Labs: https://youtu.be/VcPjOjPGa_g

UNESCO. (2023, September 21). *UNESCO Recommendation on Open Science*. Retrieved from Open Science: <https://www.c.org/en/open-science/about?hub=686>

WTO. (2023, SEPTEMBER 12). *Traditional knowledge, biodiversity*. Retrieved from TRIPS: ISSUES: https://www.wto.org/English/tratop_e/trips_e/art27_3b_e.htm

18 December 2024

ENHANCING USER EXPERIENCE AND MARKETING STRATEGIES ON DARAZ.LK THROUGH AUGMENTED REALITY INTEGRATION AND DATA VISUALISATION

K.A.S. Dilmika^{1*}

¹*Department of Social Statistics, University of Sri Jayewardenepura,
Nugegoda, Sri Lanka*

Abstract

This research focuses on applying augmented reality and data visualisation to improve both usability and the marketing theme for Daraz.lk, to determine and implement the possibility of features of AR to increase user engagement and satisfaction, as well as sales. Further, the solution is primarily meant to offer business intelligence through dashboarding and advanced data visualisation. The study suggests that AR increases user engagement to a statistically meaningful extent. but does not play a role in the perceived satisfaction of users or the sales conversion rate. The results of Spearman correlation analysis indicate that such variables as those linked to data visualisation are highly correlated; thus, further steps should be focused on enhancing the systematicity of changes in this area to improve the representation of the product information. These insights are useful in highlighting the need for the constant assessment and improvement of AR and data visualisation techniques in Daraz.lk.

Keywords: *Augmented Reality (AR), Business Intelligence, Daraz.lk, Data Visualisation, User Engagement*

**Corresponding author: Tel.: +94 (77) 4330822; Email: k.a.shehandilmika@gmail.com*

Introduction

In the context of the development of e-commerce, the improvement of the customer experience and the optimization of marketing channels are crucial for companies such as Daraz.lk. The focus of this study is to discover and incorporate augmented reality and superior data visualisation to enhance user engagement. By integrating AR features, users can interact with products in a virtual environment, and this will enhance user satisfaction and overall sales conversion rates. In addition, with the help of data visualisation, the consumer behaviour analysis will be helpful for Daraz.lk to target the marketing strategies and develop an enhanced and effective shopping experience.

Material and Methods

The data was therefore collected through an online survey administered among the Dara.lk users and a simple random sampling method was used for data collection. The target population for this study was the Daraz.lk customer base. Online Google Forms is a data collection method. Among the ninety-two received responses, eighty-eight were employed after giving the unclear or partially completed a second look and editing. The research used clustering and simple random sampling as the criteria to obtain a representative sample. The first type of statistical testing included Spearman's correlation and Levine's test for the equality of variances, whereas other methods assessed the utility of AR and DVF.

Results and Discussion

Sub Objective 01: Integrate Augmented Reality for Product Visualisation

Statistical analysis on Daraz.lk shows a significant correlation ($p = 0.001$) between AR integration and user engagement, but no significant impact on user satisfaction ($p = 0.621$) or product conversion rates ($p = 0.81$)

Sub Objective 02: Analyse Business Insights and Consumer Behaviour

The effectiveness of data visualisation (dependent variable) was tested against tool selection, algorithm development, and platform integration (independent variables). Normality was satisfactory, but Levinas' test indicated unequal variances ($p < 0.00$). Thus, Spearman's correlation was used.

Table 1:
Correlation Analysis

		Effectiveness of data visualisation in conveying product information	Selection of data visualisation tools and techniques	Development of personalised product recommendation algorithms	Integration of data visualisation features into the Daraz.lk platform
Effectiveness of data visualisation in conveying product information	Spearman's rho	1	.941**	.941**	.960**
	Sig. (2-tailed)		<.001	<.001	<.001
	N	88	88	88	88
Selection of data visualisation tools and techniques	Spearman's rho	.941**	1	1.000**	.952**
	Sig. (2-tailed)	<.001		<.001	<.001
	N	88	88	88	88
Development of personalised product recommendation algorithms	Spearman's rho	.941**	1.000**	1	.952**
	Sig. (2-tailed)	<.001	<.001		<.001
	N	88	88	88	88
Integration of data visualisation features into the Daraz.lk platform	Spearman's rho	.960**	.952**	.952**	1
	Sig. (2-tailed)	<.001	<.001	<.001	
	N	88	88	88	88

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Data Analysis Output

A Spearman's rank-order correlation revealed strong positive coefficients (ρ values from .924 to .998 at $p < .001$) between variables: Data visualisation effectiveness, choosing tools, recommendation algorithms, and their integration at Daraz.lk specifically, correlations were high: between data visualisation tools with recommendation systems and platform integration ($r = 1.000$), and recommendation system development with data visualisation tools ($R = .952$). These results show the correlation between these factors and therefore recommend multi-disciplinary approaches toward improving the representation of product information on Daraz.lk.

Conclusion and Recommendations

User Engagement: AR significantly increases user engagement, but it does not

have a considerable impact on user satisfaction or sales conversion. This means AR is successful at capturing the attention of users but perhaps needs constant refinement to retain their attention and stimulate them into making sales. Key Elements for Success: The synergy between AR and Dataviz, tool choice, and algorithm creation should stand out. Improving the systematic implementation of these features is necessary to fine-tune the marketing strategies of Daraz.lk.

As for the practical recommendations, users should be involved in carrying out several tests on AR prototypes to provide feedback for improving the features that will be incorporated into the system. It is crucial to set concrete KPIs frequency rates on AR and conversion rates to measure the efficiency of both technologies based on the outcomes of the approaches. Prepare a conceptual framework on how to implement AR in the current Daraz.lk framework with points on technical and operational implications. Improve the current data visualisation system more from the perspective of multi-disciplinary collaboration toward product representation, marketing personalized, or user decision-making.

It is therefore important to keep evaluating the use of AR features continually using the feedback of the user and the general market trends. Also, it is important to review the functionality of data visualisation from time to time so that marketing strategies will continue to address the relevant issues for effective marketing communication. Debate Potential Based on the results of this research, the findings will create a lot of buzz at conferences given the novelty of exotic technologies such as AR and data visualisation combined with the actual implementation into the dynamically changing e-commerce industry. Since Daraz.lk is one of the leading systems in South Asia, the observations derived from this study should be applicable to other e-business systems to encourage dialogue on the roles of AR and data visualisation in enriching user experiences and enhancing marketing approaches worldwide. The research incorporates Artificial Reality technology aspects and data analysis aspects, thereby embracing several fields of proficiency such as user experience design, business analytics, and digital marketing, making it applicable and interesting to various academic as well as industry domains.

References

Azuma, R. T. (1997). A survey of augmented reality. *Presence: Teleoperators & Virtual Environments*, 6(4), 355–385.
<https://doi.org/10.1162/pres.1997.6.4.355>

Billingham, M., Clark, A., & Lee, G. (2015). A survey of augmented reality. *Foundations and Trends® in Human-Computer Interaction*, 8(2-3), 73-272. <https://doi.org/10.1561/11000000049>

Gopikrishnan, M., & Ganesh, L. (2020). Impact of augmented reality on customer experience in e-commerce. *International Journal of Business Information Systems*, 34(2), 159-175. <https://doi.org/10.1504/IJBIS.2020.105436>

Huang, T. C. K., & Liu, F. Y. (2021). The impact of augmented reality on online consumer behaviour in e-commerce environments. *Journal of Retailing and Consumer Services*, 58, 102287. <https://doi.org/10.1016/j.jretconser.2020.102287>

Jaeger, B. K., & Mourant, R. R. (2018). Augmented reality and virtual reality in e-commerce. In *Handbook of Digital Media and Interactive Technologies* (pp. 123-141). Routledge. <https://doi.org/10.4324/9781315271411>

Javornik, A. (2016). Augmented reality: Research agenda for studying the impact of its media characteristics on consumer behaviour. *Journal of Retailing and Consumer Services*, 30, 252-261. <https://doi.org/10.1016/j.jretconser.2016.02.004>

Kaplan, A. M., & Haenlein, M. (2016). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53(1), 59-68. <https://doi.org/10.1016/j.bushor.2009.09.003>

Kipper, G., & Rampolla, J. (2013). *Augmented reality: An emerging technologies guide to AR*. Elsevier.

Kothari, C. R. (2004). *Research methodology: Methods and techniques* (2nd ed.). New Age International.

Lee, H., Kim, J., & Kim, J. (2018). The impact of augmented reality on customer experiences in retail: An empirical study of cosmetics AR apps. *Journal of Business Research*, 92, 387-395. <https://doi.org/10.1016/j.jbusres.2018.10.027>

Liu, Y., & Jiang, L. (2021). User engagement and behaviour in AR-based retail environments. *International Journal of Human-Computer Studies*, 145, 102527. <https://doi.org/10.1016/j.ijhcs.2020.102527>

Pelet, J. E., Lecat, B., & Papadopoulou, P. (2020). The impact of augmented reality on e-commerce consumer retention. *Journal of Retailing and Consumer Services*, 54, 101948. <https://doi.org/10.1016/j.jretconser.2019.101948>

Poushter, J., Bishop, C., & Chwe, H. (2018). Social media use continues to rise in developing countries but plateaus across developed ones. *Pew Research Center*. <https://www.pewresearch.org/global/2018/06/19/social-media-use-continues-to-rise-in-developing-countries-but-plateaus-across-developed-ones/>

Thilakarathna, K., & Wijeratne, A. (2020). Augmented reality in Sri Lanka: Current trends and future perspectives. *Journal of ICT for Development in Sri Lanka*, 10(1), 45–58. <https://doi.org/10.4038/jict4d.v10i1.7885>

Wijesundara, C. (2020). Adoption of augmented reality in Sri Lankan retail industry: An exploratory study. *University of Colombo Review*, 9(2), 103–115. <https://doi.org/10.31357/ucr.v9i2.2019>

EXAMINING EFFICIENCY IN TEA ESTATES: CLUSTERING THE ELECTRICITY AND FUEL WOOD CONSUMPTION PATTERNS ALONGSIDE PRODUCTION METRICS

W.Y.S. Wickramasinghe^{1*}, E.R.A.D. Bandara²

^{1, 2} *Department of Statistics, Faculty of Science, University of Colombo*

Abstract

Sri Lankan tea estates use electricity and fuelwood as main energy sources. Production efficiency relies on its optimal utilization of energy sources. Production efficiency can be measured per month by monthly production per unit of electricity (kWh) and that production per unit of fuelwood (cubic meters) usage. For the analysis, monthly data from the Cost Management Reports on tea production efficiency from estates of Dersford, Somerset, Great Western, Barwell, Wategoda, Holyrood, Moragalla, Deniyaya, Kiruanaganga, Radella, and Mattakelle, belonging to Talawakelle Tea Estates PLC were considered for the period from 2017 to 2023, based on both energy sources. The research objective is to categorize estates based on their production efficiency. The available time-related data was analysed using the Hierarchical Cluster Method, with monthly benchmarks set at 1.2 kg/kWh and 200 kg/m³ for electricity and fuelwood respectively. Results of the cluster analysis based on electricity usage show that Somerset and Barwell were classified as 'High', Radella as 'Low', and the rest as 'Moderate'. Based on fuelwood consumption, Radella was classified as 'Low' and the rest as 'High', while Somerset was classified as 'High' and Radella as 'Low' for electricity and fuelwood usage. The results can be used to enhance the production of the company.

Keywords: *Cluster, Efficiency, Electricity, Fuelwood, Tea Estates*

**Corresponding author: Tel.: +94 (77) 184 1888; Email: wysanjeewanie620@gmail.com*

Introduction

The quality of tea depends on each estate's performance. Sri Lankan tea plantations use electricity and fuelwood as their main energy sources. The production efficiency of each estate is measured based on the amount of made tea per unit of electricity and per cubic meter of fuelwood. The monthly target values derived from the Cost Management Reports are 1.2 kg per unit, 200 kg per cubic meter for electricity and fuelwood respectively. These benchmarks were used to assess the production efficiency of each estate. This analysis will lead to categorisation of the estates managed by the Talawakelle Tea Estates PLC based on their performances and also identify the areas for improvement in particular estates.

Material and Methods

Information was gathered from the Energy Consumption section of the Cost Management Reports of Talawakelle Tea Estates PLC, covering seven years of monthly data for 11 estates: Dessford, Somerset, Great Western, Bearwell, Wattegoda, Holyrood, Moragalla, Deniyaya, Kiruanaganga, Radella, and Mattakelle. To ensure the robustness of the findings, data validation was carried out by cross-referencing entries with invoices and external audit reports. This allowed for accurate verification and reduced potential reporting biases, enhancing confidence in the results. This dataset includes 924 observations from 2017 to 2023. To achieve the goal, we divided the monthly product by the consumption of each energy source and created new variables “output_fuel” and “output_power” separately.

Cluster analysis, an unsupervised learning technique, was used to group the estates. This method identifies similarities among data elements without labels, forming distinct groups called “clusters” (Amidon, 2020). The Hierarchical Cluster Algorithm (HCA) grouped estates based on similar production patterns relative to electricity and fuelwood use.

The collected data becomes a time series because it is organised by time. Time series data relies on the order of events, and patterns might appear at different times or last for different lengths. Hierarchical clustering can handle these characteristics well by keeping the sequence of data points, accommodating different lengths of series, and spotting similar patterns even if they do not line up perfectly in time.

Hierarchical clustering (HCA) finds similar data points and shows them in a tree-like structure called a Dendrogram. Each branch in the tree represents a group of similar points, and the end of each branch (nodes) shows individual

points or smaller groups (Geeks for Geeks, 2013). The algorithm starts by declaring each of the n Estates as a single cluster. In the first step, the two most similar estates are merged from one cluster, giving in all $(n-1)$ clusters. In the second step, the two most similar estates are merged to form one cluster, giving in all $(n-2)$ clusters. The iterative process is repeated until all estates are merged into the same cluster occurring in step $(n-1)$. This helps to see how different clusters are related visually.

In time series analysis, various distance metrics can measure similarity between sequences, and one notable option is Dynamic Time Warping (DTW). DTW is effective because it can align sequences of different lengths flexibly. It uses dynamic programming to match parts of one sequence to parts of another, making it robust for comparing time series data. DTW is particularly useful for its ability to handle sequences with varying lengths and misalignments (Denyse, 2021). The underlying equation is used to calculate the DTW distance, which involves taking the square root of the sum of squared distances between each element in sequence X and its corresponding nearest point in sequence Y .

$$DTW(x, y) = \sqrt{\sum_{(i,j) \in \pi} d(x_i, y_j)^2}$$

Where $\pi = [\pi_0, \pi_1, \dots, \dots, \dots, \pi_k]$ is a path that satisfies the following properties:

- It is a list of index pairs $\pi_k = (i_k, j_k)$ with $0 \leq i_k < n$ and $0 \leq j_k < m$
- $\pi_0 = (0,0)$ and $\pi_k = (n-1, m-1)$
- For all $k > 0$ $\pi_k = (i_k, j_k)$ is related to $\pi_{k-1} = (i_{k-1}, j_{k-1})$ as follows:
 - $i_{k-1} \leq i_k \leq i_{k-1} + 1$
 - $j_{k-1} \leq j_k \leq j_{k-1} + 1$

The dissimilarity metric measures how different two clusters are by checking the distances between their members (Amidon, 2020). Average linkage was used to find the average distance between all pairs of points in two clusters.

When moving on to the cluster evaluation the Silhouette Score was used to determine and ensure the reliability and effectiveness of clustering results. The elements of the Silhouette Score equation, a , and b represent the mean distance

between a sample and all other points in the same class and the mean distance between a sample and all other points in the next nearest cluster respectively.

$$S = \frac{(b-a)}{\max(a,b)} \quad (2)$$

The Python software performed all the integration, data wrangling, visualisation, and clustering analysis tasks.

Results and Discussion

In this analysis, two different approaches are used. After selecting the optimal distance and the dissimilarity measure, the hierarchical clustering method provides results separately for each energy source. The vivid colors show how the clusters group at specific distances in the dendrogram.

Electricity

Figure 1:
Dendrogram for the Electricity

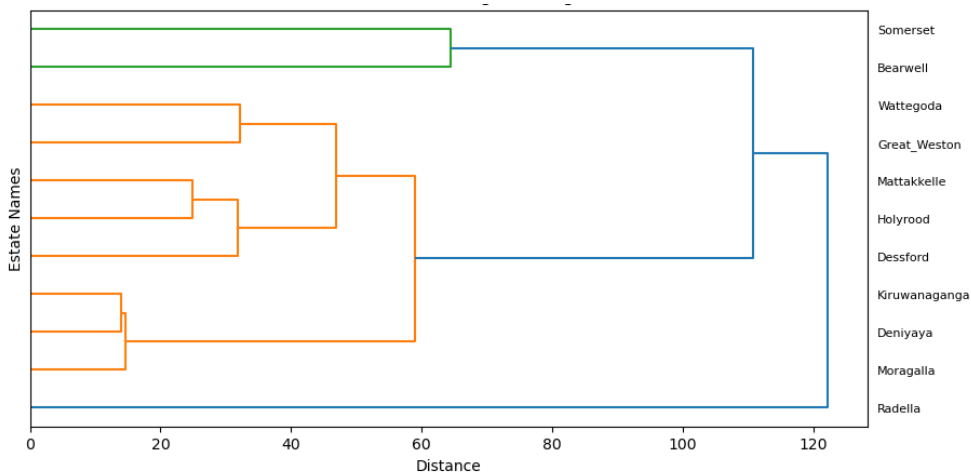
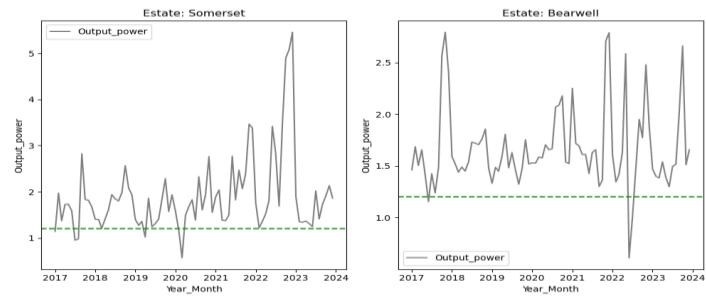


Figure 1 shows that at a distance of 80, the estates are grouped into three clusters.

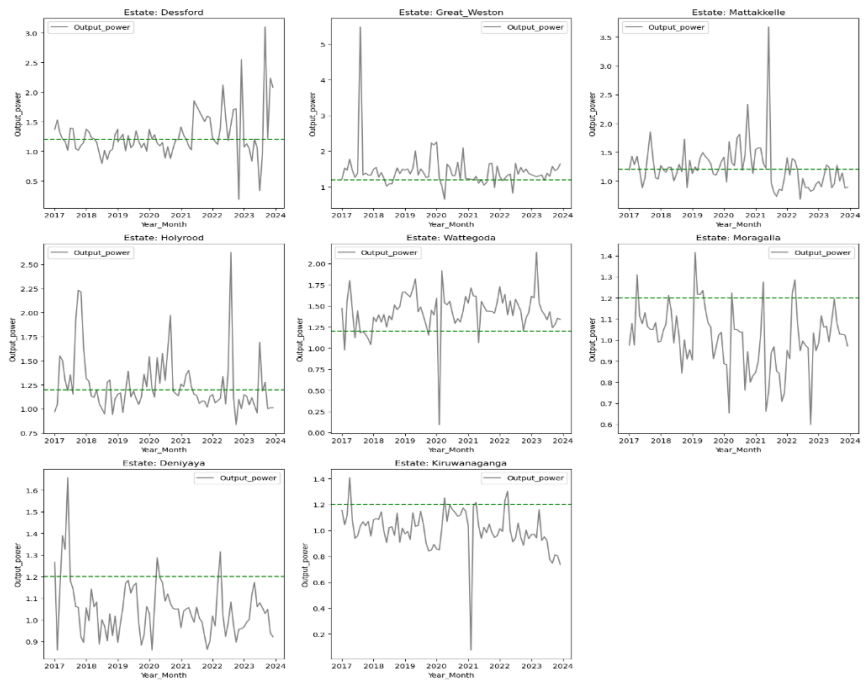
Figure 2 illustrates three clusters based on electricity monthly targeted value: High, Low, and Moderate. Somerset and Bearwell Estates performed exceptionally well, surpassing the 1.2 kg/unit benchmark, earning them the 'High' cluster label. Although Moragalla, Deniyaya, and Kiruwanaganga showed minor variations around 1.2, they also earned the 'Moderate' cluster label with the remaining estates. Finally, Radella estate fell below 1.2, marking it as part of the 'Low' cluster.

Figure 2:
Clusters for Electricity

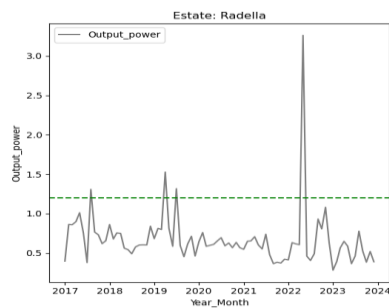
High:



Moderate:

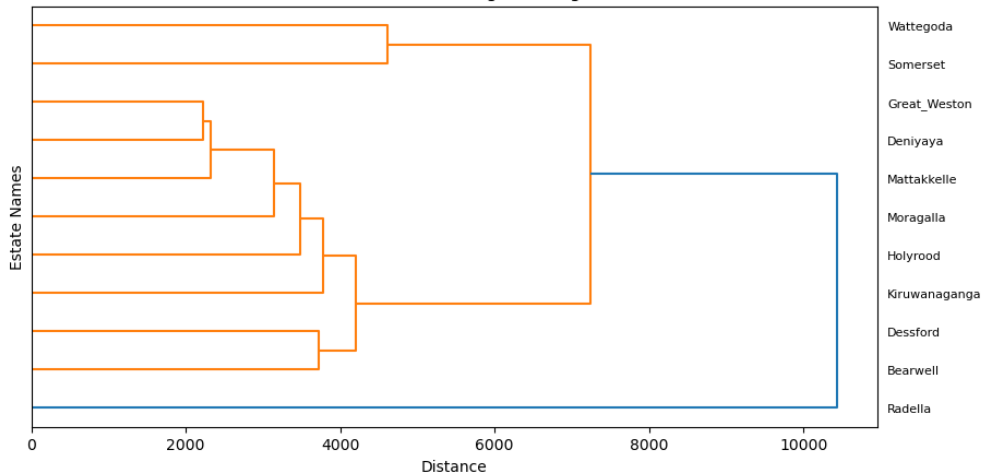


Low:



Fuelwood

Figure 3:
Dendrogram for the Fuelwood

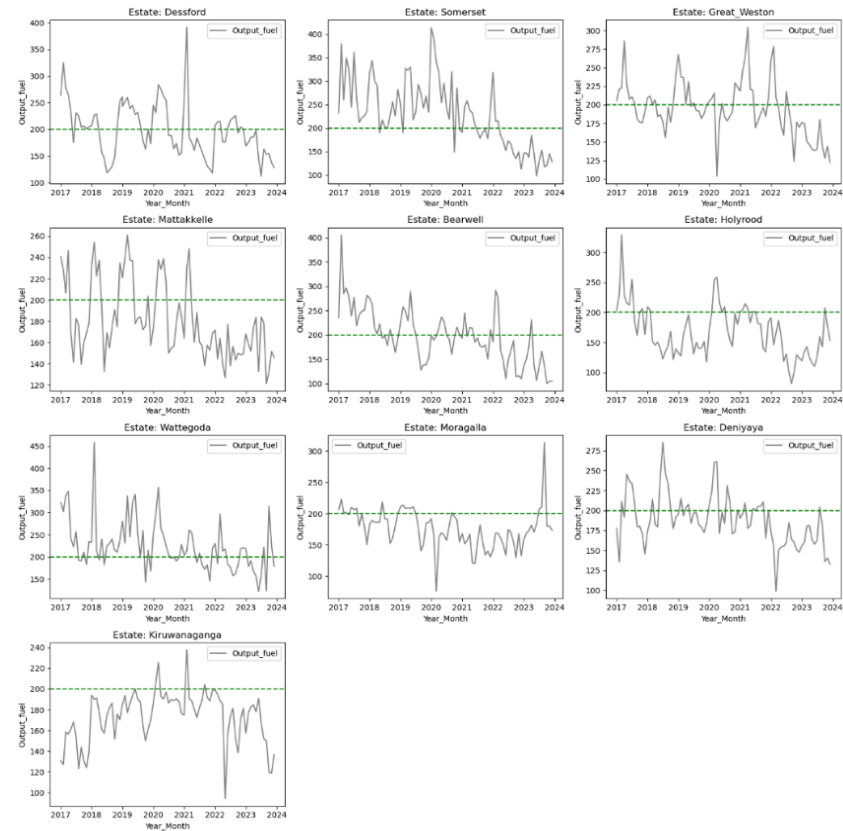


According to Figure 3 at a distance of 8000 two clusters form, one includes all estates except Radella, which is in its separate cluster

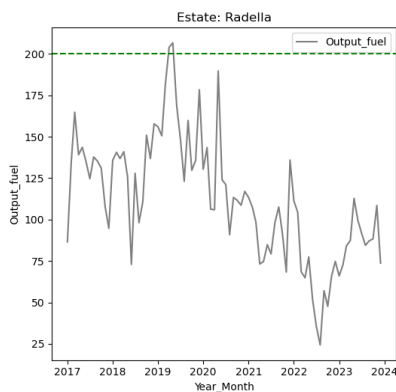
Figure 4 reveals two clusters based on their performance compared to a monthly target of 200, most estates' fluctuations center around 200, indicating high performance compared to Radella. This group was called the 'High' cluster. The second cluster, which includes Radella Estate, shows low performance compared to the target of 200. Therefore, it's labeled the 'Low' cluster.

Figure 4:
Clusters for Fuelwood

High:



Low:



The accuracy of the clusters was evaluated using the Silhouette Scores, which were 0.2101 for electricity and 0.3269 for fuelwood. It is crucial to ensure that each time series is allocated to only one cluster to prevent duplication. Yet, if both heterogeneity and homogeneity display similar patterns, this could affect the accuracy, resulting in a lower score.

Conclusion and Recommendations

Somerset estate's product efficiency is high, while Radella estate's product efficiency is lower than other estates for electricity and fuelwood usage.

Several steps can be taken to improve production. Product efficiency may decrease due to waste of materials and energy. Hence, efficiency can be enhanced by increasing production or reducing energy wastage.

Fuelwood and electricity are not the only energy sources that affect a product's efficiency. It is also influenced by other elements, such as labour and weather. To allow for more investigation, it was anticipated that these extra variables would remain constant for the sake of this analysis and only consider as mentioned before benchmark values for fuel wood and electricity.

This study may not be applicable to other estates or geographical areas because it only uses data from 11 estates under the management of a single company. These estates may have different locations, management styles, or approaches than others, which could impact the outcomes and restrict their applicability. This can be considered as the limitation of this study.

References

- Amidon, A. (2020, December 9). How to apply hierarchical clustering to time series. *Towards Data Science*. <https://towardsdatascience.com/how-to-apply-hierarchical-clustering-to-time-series-a5fe2a7d8447>
- Bolton, D. (2023, January). Tea exports declined in 2023. *Stir Tea & Coffee Industry News*. <https://stir-tea-coffee.com/tea-coffee-news/tea-exports-declined-in-2023/>
- Caroline, X. G., & Denny, D. D. (2023, September). An overview of clustering methods with guidelines for application in mental health research. *Psychiatry Research*, 28.
- Denyse. (2021, July 21). Time series clustering: Deriving trends and archetypes from sequential data. *Towards Data Science*. <https://towardsdatascience.com/time-series-clustering-deriving-trends-and-archetypes-from-sequential-data-bb87783312b4>
- Geeks for Geeks. (2013, May). Clustering in machine learning. Noida, Uttar Pradesh, India. <https://www.geeksforgeeks.org/>
- Kasturiratne, D. (2008). An overview of the Sri Lankan tea industry: An exploratory case study. *The Marketing Review*, 367–381.

Kun, Z., & Zhang, S. L. (2022). Dynamic time warping-based clustering for time series analysis. In *IoT and big data technologies for health care* (pp. 376–385).

Rodrigues, P. P., & Gama, J. (2008, May). Hierarchical clustering of time-series data streams. *IEEE Transactions on Knowledge and Data Engineering*, 20(5), 615–627.

ASSESSING THE EFFECTIVENESS OF DESIGN AND APPROVAL PROCESS OF STUDENT EVALUATION SYSTEM: A SYSTEMATIC LITERATURE REVIEW

D.N.A. Dissanayake^{1*}, R.M.N.B. Rathnayaka², J.D.U. Indumini³

^{1,2}*Departemnet of IT, Social Sciences and Languages, Sabaragamuwa University of Sri Lanka, Belihuloya*

³*Centre for Computer Studies, Sabaragamuwa University of Sri Lanka, Belihuloya*

Abstract

This study explores the use and effectiveness of Business Process Modeling Notation (BPMN) and Responsible, Accountable, Consulted, and Informed (RACI) in the design and approval process of student evaluation systems, utilizing the PRISMA statement. Before creating a system, it is crucial to uncover the scope. The study's primary objective is to identify gaps in the existing literature. For that, this review seeks to pinpoint gaps in integrating BPMN and RACI into educational assessment practices. This research employs the PRISMA statement to identify, select, and critically analyse relevant literature from four academic databases. A total of 155 articles were gathered and underwent three phases: identification, screening, and inclusion. After exclusion, 15 reports were included. The findings of this study aim to uncover gaps in existing literature and enhance evaluation methodologies. Additionally, we seek to inform administrators and researchers about the potential benefits of utilising these frameworks in student assessment.

Keywords: *BPMN, PRISMA, RACI, Student Evaluation, Systematic Literature Review*

**Corresponding author: Tel.: +94 (71) 514 6861; Email: nihinsadissanayake@gmail.com; <https://orcid.org/0009-0008-2769-7043>*

Introduction

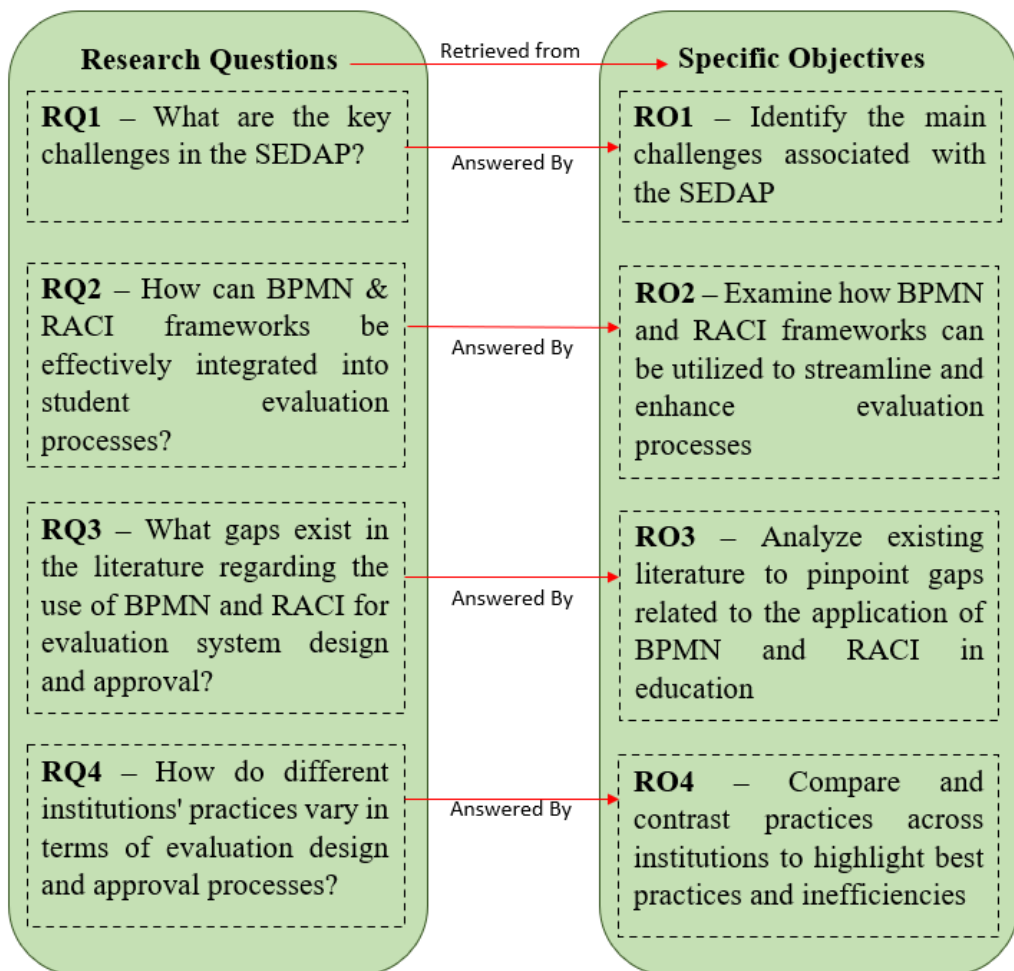
Academic achievement in today's ever-changing educational landscape continues to depend on the efficient assessment of students' performance. Ensuring that assessments are equitable, transparent, and aligned with an institution's educational goals requires a strong student evaluation system. Exams are a vital part of this assessment system and are highly significant in determining students' academic progress. The Students' Evaluation Design and Approval Process (SEDAP) involves the initial planning and designing of the evaluation system.

By synthesising existing research, this review seeks to pinpoint gaps in integrating BPMN and RACI into educational assessment practices. Using student feedback questionnaires to evaluate teaching performance and quality has become almost ubiquitous in higher education institutions (Marco Centoni, 2021). Nazar Elfadil (2022) conducted a systematic literature review (SLR) to assess students' readiness for embedded system design.

When considering previous studies, Agir et al., (Agri, 2023) has used outcome-based assessment (OBA) in the evaluation of education programs to measure the students' knowledge and skills. Also, (Albreiki, 2021) used PRIZMA with machine learning techniques. Even though both of them used PRIZMA, RACI and BPMN were not used in the assessment context.

This systematic literature review targets to explore the use and effectiveness of BPMN and RACI frameworks in the SEDAP, utilising the PRISMA statement. The primary objective of the study is to identify gaps in the existing literature. Research questions and objectives are presented in Figure 1.

Figure 1:
Research questions & objectives

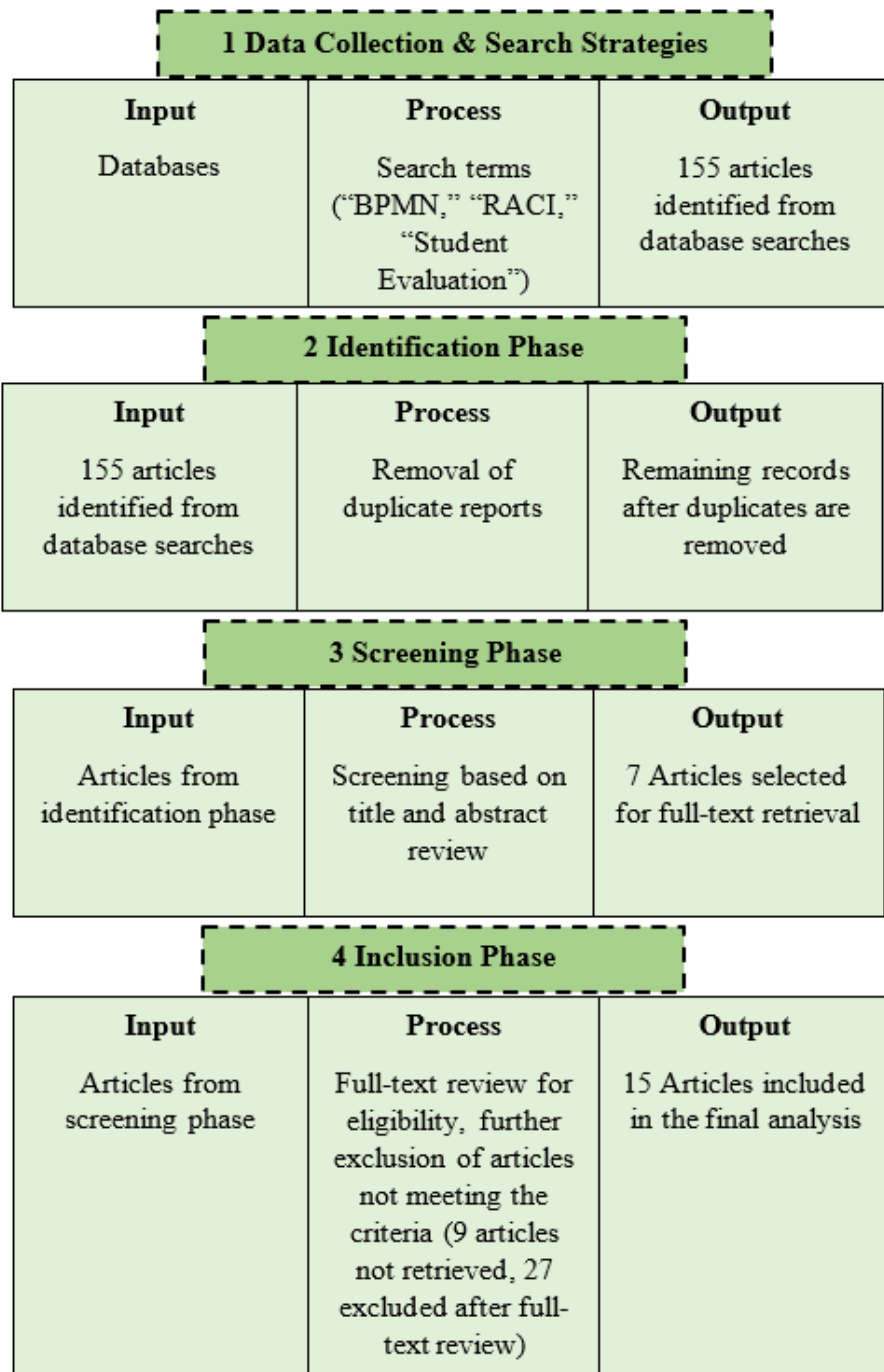


Source: Author generated diagram, 2024

Material and Methods

The methodology, as illustrated in Figure 1, outlines the systematic review process adopted in this study, following PRISMA guidelines. The methodology was divided into data collection, identification, screening, and inclusion phases, as depicted in the diagram.

Figure 2:
Systematic Methodology Diagram



Source: Author Generated Diagram, 2024

Inclusion & Exclusion Criteria

Table 1:
Exclusion Criteria in the Screening Process

Reasons for Excluded Reports		Total
Identify new studies via databases & registers		
1	Ineligible population	15
2	Applied methodologies are different	9
3	Being irrelevant to the main subject	3
Identify new studies via other methods		
1	Outcome evaluation methods were different	13
2	Being irrelevant to the main subject	6
3	Applied methodologies are different	4
Total excluded		50

In addition to the inclusion and exclusion criteria, a quality assessment was conducted to ensure the relevance of the selected papers. Following was used with criteria including,

- Clarity of the research objective
- Appropriateness of the methodology
- Validity and reliability of results
- Peer-reviewed status

Each study was assigned a score on a scale of 1-5, with only those scoring 3 or higher included in the final analysis.

Results and Discussion

This section presents the results found through this systematic revision process. This section is divided into two parts following the output.

Results of PRISMA Statement

i. Identify new studies via databases & registers

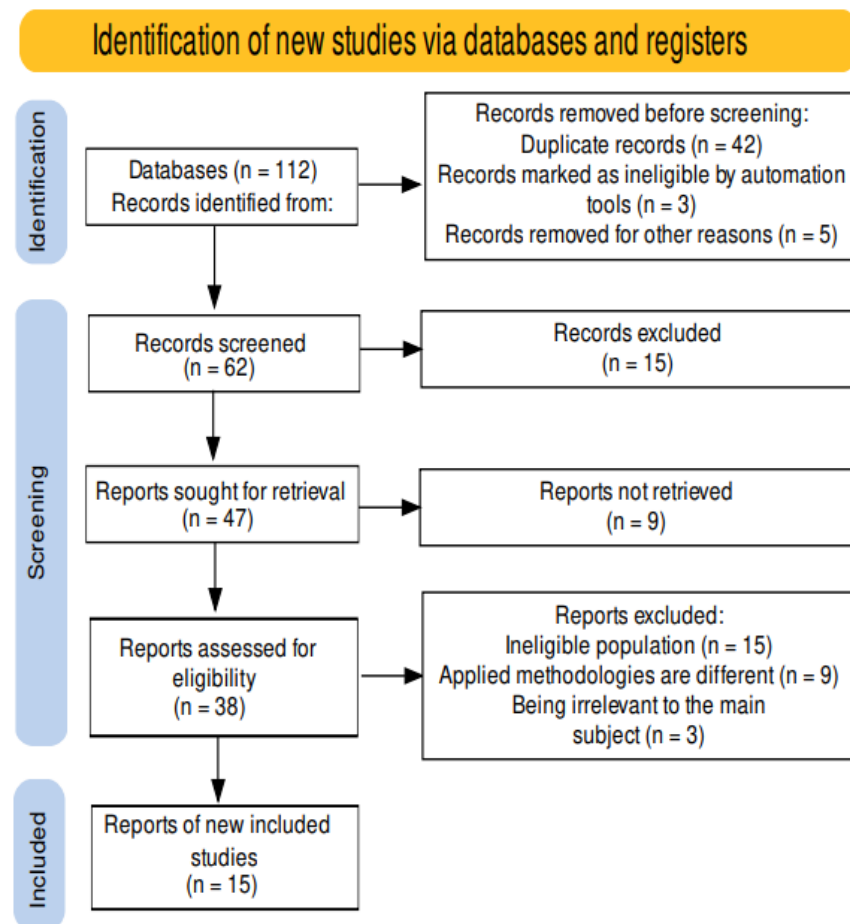
Under this process, 62 duplicate reports were removed, and 3 ineligible records were identified by automation tools. Further, 5 other records were

removed for other reasons.

The screening section is important as this is where the bulk of records will be excluded and also gives some justifications as to why they were chosen to remove these records. A total of 62 records underwent the screening process. From the total of 62, 15 records were excluded. 47 reports were sought for retrieval and among those, 9 reports were not retrieved. After being assessed for eligibility, 38 reports were selected and 27 reports were excluded.

Figure 3:

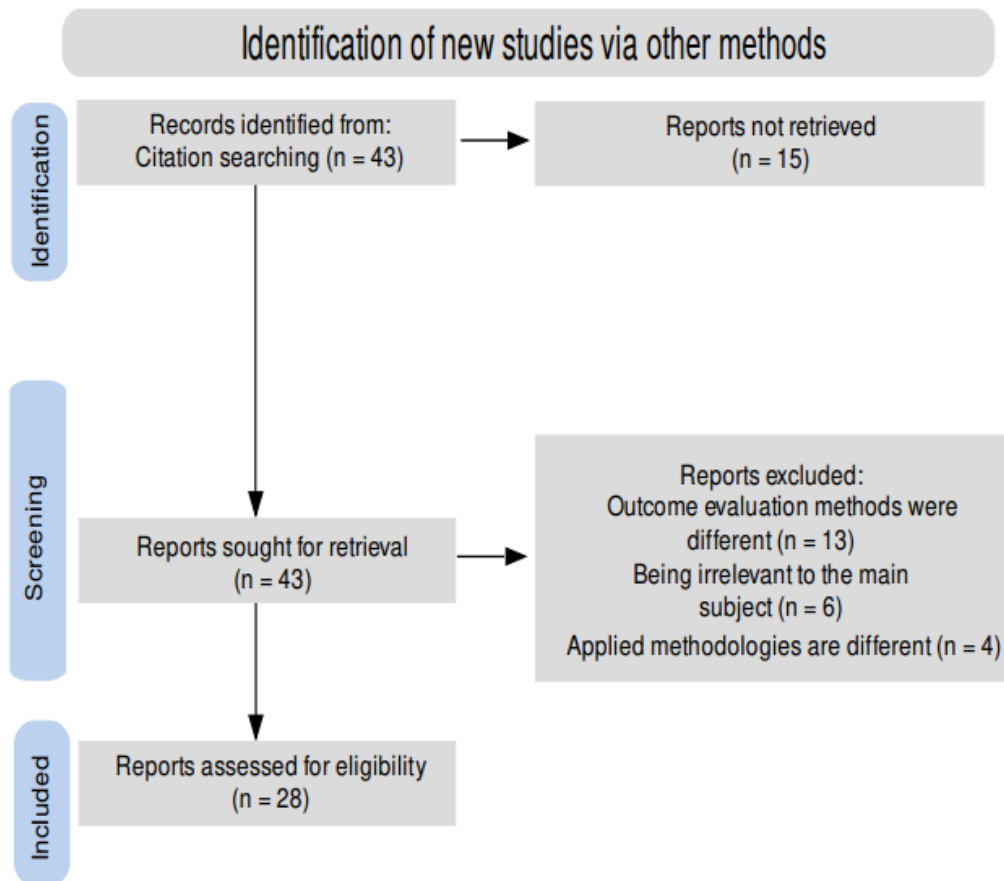
Identify New Studies Via Databases & Registers



ii. *Identify new studies via other methods*

Under the identification of new studies via other methods, 43 records were identified from citation searching. A total of 15 reports were not retrieved and the other 28 reports were assessed for eligibility.

Finally, 15 reports were included in the finalisation phase.

Figure 4:*Identify New Studies Via Other Methods***Characteristics of Included Studies**

All the included 15 studies were organised by the publication year and by the first author's name with a number code related to the database.

Table 2:*Number Code list with Databases*

Number Code	Database
SP	Springer
GS	ScienceDirect
IEX	IEEE Explore
SCP	Scopus

Source: Author Generated Diagram, 2024

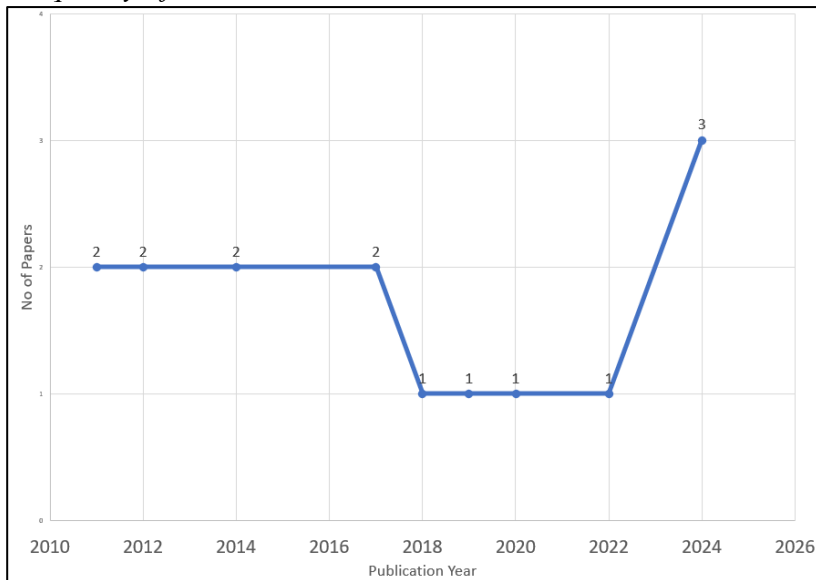
The search based on the inclusion criteria yielded a total of 15 articles. A few papers which are included can be summarised as below.

Table 3:
Summary of Selected Articles

No Code	Year	Title
SP1	2011	Mixing RASCI Matrices & BPMN for Responsibility Management
SD3	2017	BPM-based framework for e-government processes improvement: legal requirements integration
SD1	2011	Student-Centred Learning in Higher Education
IEX2	2014	Obtaining secure BPEL from Secure Business Process specified with BPMN
IEX3	2022	Modelling IoT Behaviour in Supply Chain Business Processes with BPMN: A Systematic Literature Review

Character 01 – Frequency of Publication Year

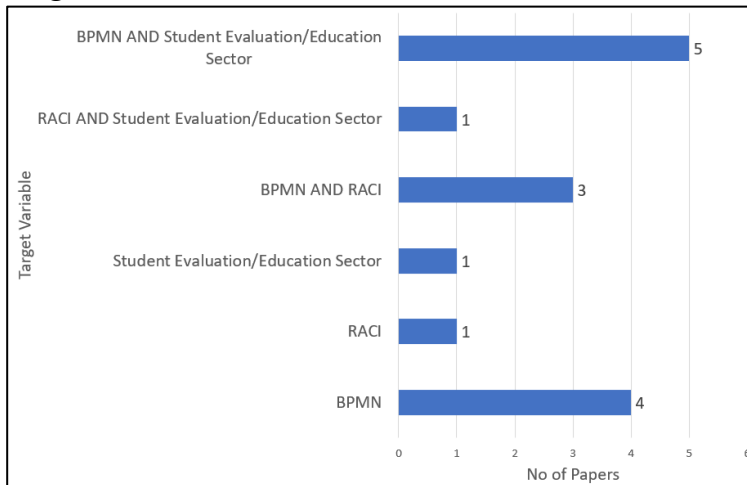
Figure 5:
Frequency of Publication Year



Character 02 – Target Variable

Based on the searching terms, papers can be categorised into 5 lists.

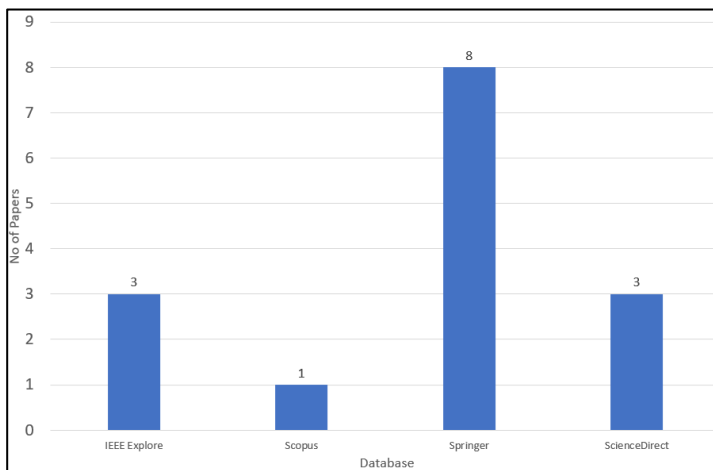
Figure 6:
Target Variable



Character 3 – Source Database

Studies can be categorised into 4 parts on the source database.

Figure 7:
Source Database



By using PRISMA we tried to identify as many eligible studies as possible using broadened searching terms, and applied methodologies.

Conclusion and Recommendations

This research study aims to conduct a well-organised systematic review of SEADP aligned with BPMN and RACI, intending to present an international perspective on the related subject. After correctly identifying the scope of the study, data was collected using four databases using search terms. The PRISMA statement was used as the methodology framework for this research. After identification, screening, and included stages final included studies were 15. Following analysis, the results were divided into two parts for clarity. The first part is consistent with the results of PRISMA and the second part discusses characteristics of included studies. This study provides a unique contribution by focusing on the design and approval stages of student evaluation systems, which are often overlooked in existing literature. This research is among the first to integrate these frameworks into student evaluation processes, bridging a gap between BPM techniques and educational assessment practices. The findings of this study aim to uncover clear gaps in the literature and enhance evaluation methodologies. In the near future, we are planning to develop a system for evaluating students. For that process, this study can be very helpful in advance. Additionally, we seek to inform administrators and researchers about the potential benefits and limitations of utilising these frameworks in student assessment.

References

- Agri, N., & El-Ela, M. E. (2023). Outcome-based assessment in the evaluation of education programs through a systematic literature review. *International Journal of Academic Research in Progressive Education & Development*, 12(2), 2483-2497. <https://doi.org/10.6007/IJARPED/v12-i2/18095>
- Albreiki, B., & Zidan, N. (2021). A systematic literature review of student's performance prediction using machine learning techniques. *Education Sciences*. <https://doi.org/10.3390/educsci11090552>
- Centoni, M., & Mazzoni, A. (2021, June 26). Students' evaluation of academic courses: An exploratory analysis of an Italian case study. *Studies in Education Evaluation*, 70. <https://doi.org/10.1016/j.stueduc.2021.101054>
- Elfadil, N., & Lwanga, I. (2022). Embedded system design student's learning readiness instruments: A systematic literature review. *Frontiers in Education*, 7. <https://doi.org/10.3389/feduc.2022.799683>

SYSTEMATIC REVIEW ON THE EFFECTIVENESS OF SCHEDULING AND EXECUTION IN STUDENT EVALUATION SYSTEMS

H.M.N.H. Somasiri^{1*}, R.M.N.B. Rathnayake², J.D.U. Indumini³

¹ Center for Computer Studies, Sabaragamuwa University of Sri Lanka, Belihuloya

² Department of IT, Sabaragamuwa University of Sri Lanka, Belihuloya

³ Center for Computer Studies, Sabaragamuwa University of Sri Lanka, Belihuloya

Abstract

Student evaluation systems are critical tools in higher education for assessing student performance and promoting accountability and improvement in educational practices. A research literature review was conducted using four databases and citation searches, employing the keywords “student evaluation,” “RACI,” and “BPMN”. The search yielded 188 studies, with 128 from databases and 60 from citations. A three-step process was applied: first, 47 records were removed during identification; second, 72 studies were excluded after full-text screening; and finally, 12 studies (nine from databases and three from other methods) were selected using the PRISMA model. The purpose of this systematic review is to identify and analyse gaps in student evaluation systems, focusing on the scheduling and execution processes. This research uses a systematic review to uncover gaps in student evaluation systems and offers recommendations for enhancing assessment practices using BPMN and RACI frameworks.

Keywords: *Student Evaluation, PRISMA, RACI, BPMN, Systematic Review*

*Corresponding author: Tel.: +94 (70) 265 3224; Email: navodyaheshani008@gmail.com;
<https://orcid.org/0009-0005-9212-0871>

Introduction

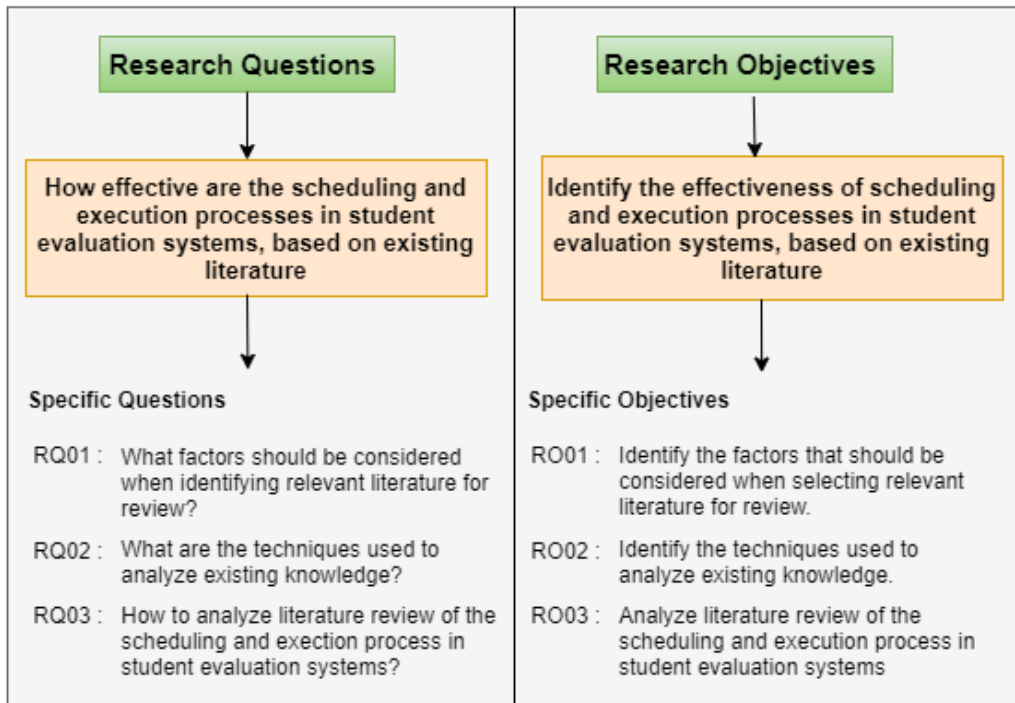
Student evaluation systems involve gathering and analysing data to assess and track student performance throughout their academic career. In the modern educational environment, evaluating student performance is essential to identifying the effectiveness of methods of instruction, evaluating learning goals, and ensuring academic success. Advances in technology have introduced new, creative ways to improve procedures, through barriers to their implementation in educational institutions still exist (Villegas, 2023).

A Systematic Literature Review (SLR) is a well-established method for rigorously identifying, evaluating, and synthesizing existing research on a particular topic (Angioi & Hiller, 2023). This procedure has been set up in advance of the review to ensure repeatability and transparency. The keywords were focused on the criteria set for the review (Borrego, Foster & Froyd, 2014). In this study, the keywords “student evaluation”, “scheduling and execution process”, Responsible, Accountable, Consulted, and Informed (RACI) framework, and Business Process Modeling Notation (BPMN) were used to search for relevant studies. Before starting the process, the inclusion and exclusion criteria need to be defined. Inclusion and exclusion criteria, such as target population, study outcomes, design, location, and condition of interest, are applied to refine search results rather than limit them (Anderson S., 2022). A study’s exclusion criteria are the things that would prevent it from being included (Koym, 2022). This defines limits for the synthesis of the evidence and is usually reported in the publication’s methodology section (Morgan, 2023). It could be important to define terms for readers who are unfamiliar with them to fully explain the criterion. This research seeks to systematically identify gaps in the current student evaluation systems through an in-depth review of existing studies. Furthermore, the research provides insights for academics and administrators on the potential benefits and challenges of integrating RACI and BPMN frameworks into student evaluation practices, ultimately contributing to the improvement of educational assessment systems.

Research Questions and Objectives

Figure 1:

Chart Describing the Research Questions and Objectives



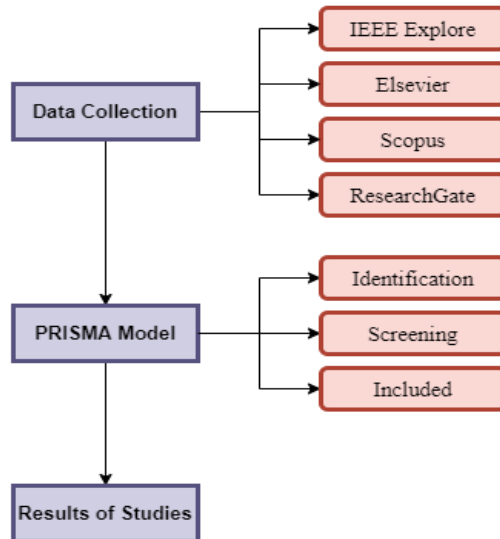
Material and Methods

This study mainly focused on existing studies related to the scheduling and execution process of the student evaluation system in a systematic literature review using the PRISMA model.

The following figure describes the research approach.

Figure 2:

The Flowchart Depicting the Study Selection Process Using the PRISMA Model

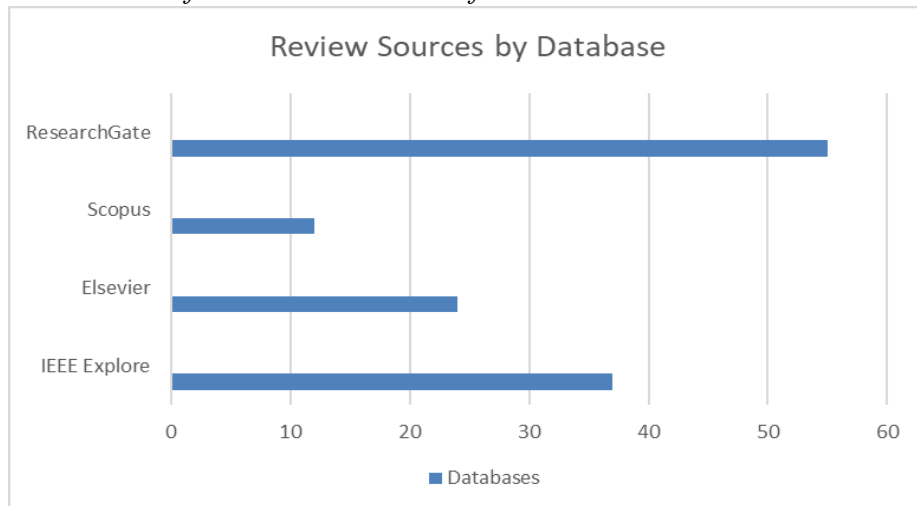


The first step is to collect literature reviews from four research databases: IEEE Xplore, Elsevier, Scopus, and ResearchGate. The previous studies that used the PRISMA model served as helpful aids for the investigation of the study. The study is based on data collection from research databases and citation searching methods, using the keywords “student evaluation”, “RACI”, and “BPMN”. The PRISMA framework ensured that only the most relevant and high-quality studies were included in the final analysis, allowing for a focused and in-depth exploration of the scheduling and execution challenges in evaluation systems.

Results and Discussion

Figure 3:

Distribution of Literature Collected from Databases



After going through the PRISMA model's three stages of identifying the eligible studies for this systematic literature review's analysis, the total number of research papers collected was 188, with 128 sourced from databases and 60 from citation searches.

The results of the reviews using the PRISMA model are shown in Figure 4.

Figure 4:
The Results of the PRISMA Model Illustrating the Identification, Screening Eligibility, and Inclusion of Studies in the Systematic Literature Review

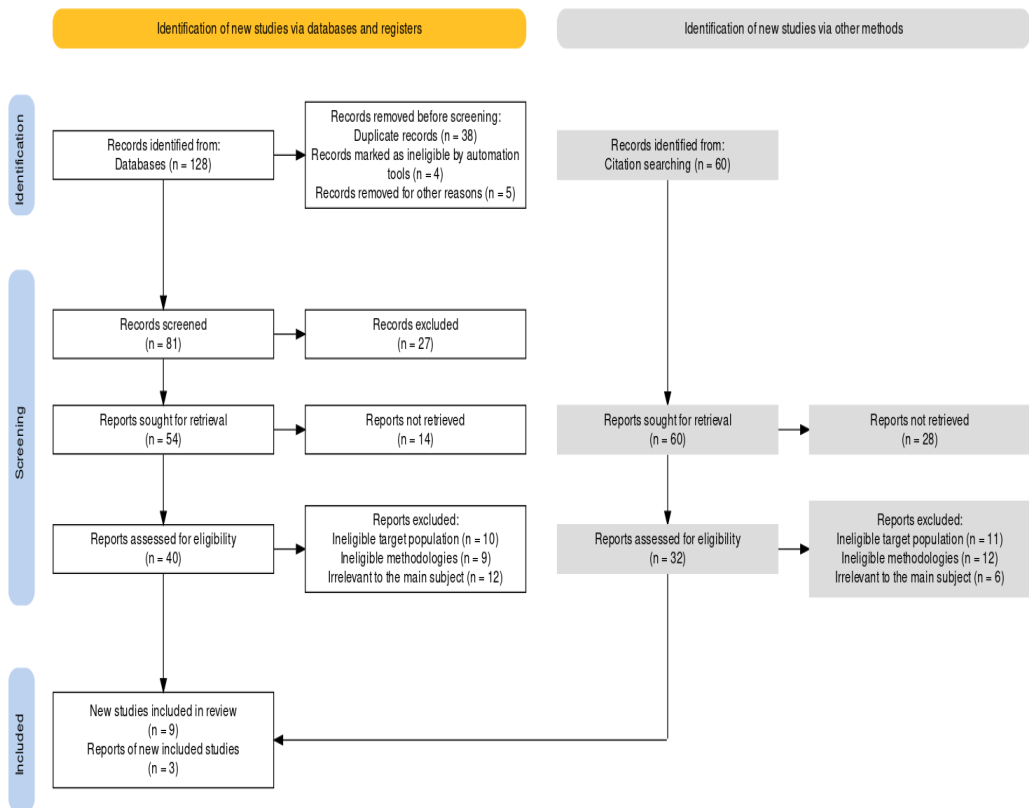
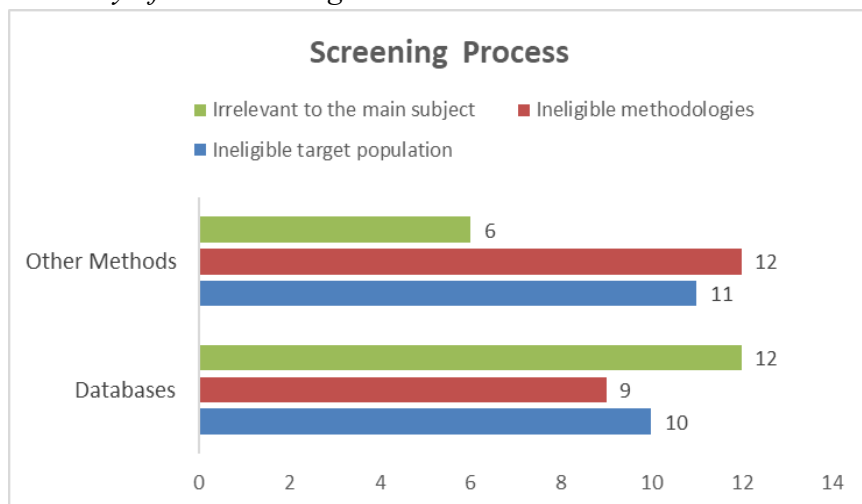


Figure 5:
Summary of the Screening Process in the PRISMA Model



The summary of the PRISMA model's final results, including all removed records across the different steps, is shown in Table 1.

Table 1:

Results of the PRISMA Model

Method	Process	Step	Removed Records
Database	Identification	Duplicate records	38
		Ineligible by automation tools	4
		Other reasons	5
	Screening	Records excluded	27
		Reports not retrieved	14
		Ineligible target population	10
		Ineligible methodologies	9
		Irrelevant to the main subject	12
Other Methods	Screening	Reports not retrieved	28
		Ineligible target population	11
		Ineligible methodologies	12
		Irrelevant to the main subject	6

In the screening exclusion step, 29 records from other methods and 31 records from the database were excluded for the reasons stated earlier. The final 12 papers of the review can be summarised in Table 2.

Table 2:
Results of the Systematic Literature Review

Author(s)	Year	Title	Keywords
Flavio Corradini ¹ , Alessio Ferrari ² , Fabrizio Fornari ¹ , Stefania Gnesi ² , Andrea Polini ¹ , Barbara Re ¹ , and Giorgio O. Spagnolo ²	2017	A Guidelines Framework for Understandable BPMN Models	BPMN
Cristina Cabanillas, Manuel Resinas and Antonio Ruiz-Cortés	2017	A template-based approach for responsibility management in executable business processes	RACI, BPMN
Cristina Cabanillas, Manuel Resinas, and Antonio Ruiz-Cortés	2012	Automated Resource Assignment in BPMN Models Using RACI Matrices	RACI, BPMN
Michele Chinosi, Alberto Trombetta	2011	BPMN: An introduction to the standard	BPMN
Bruce Silver	2019	BPMN METHOD AND STYLE SECOND EDITION WITH BPMN IMPLEMENTER'S GUIDE	BPMN
Erik Blaira and Keisha Valdez Noela	2014	Improving higher education practice through student evaluation systems: is the student voice being heard?	Student Evaluation
Cristina Cabanillas, Manuel Resinas, and Antonio Ruiz-Cortés	2011	Mixing RASCI Matrices and BPMN Together for Responsibility Management	RACI, BPMN
Michael L Smith and James Erwin	2005	Role & Responsibility Charting (RACI)	RACI
Stephen Darwin	2016	Student Evaluation in Higher Education	Student Evaluation
James J Ryan, James A Anderson, and Allen B Birchler	1980	STUDENT EVALUATION THE FACULTY RESPONDS	Student Evaluation
B. Wayne Kemp and G. S. Kumar	2013	Student Evaluations: Are We Using Them Correctly?	Student Evaluation
Gero Decker and Alistair Barros	2008	Interaction Modeling Using BPMN	BPMN

Conclusion and Recommendations

This systematic review has explored the gaps and inefficiencies in current student evaluation systems, with a particular focus on the scheduling and execution processes. Through a thorough analysis of the literature using the PRISMA model, 188 studies were initially identified, and after rigorous screening and exclusion steps, 12 studies were selected for in-depth analysis.

One of the key findings of this review is the potential for enhancing student evaluation systems through the integration of structured frameworks such as the Responsible, Accountable, Consulted, and Informed (RACI) framework

and Business Process Model and Notation (BPMN). These frameworks offer structured approaches that can improve the clarity of roles and streamline processes within evaluation systems, addressing some of the inefficiencies identified in the literature.

The review highlighted that many evaluation systems lack robust mechanisms for efficiently scheduling evaluations and executing them in a timely manner, which has a direct impact on the quality of student assessments. The application of BPMN, for instance, could offer clearer procedural guidance, while the RACI framework could help clarify responsibilities across various stakeholders in the evaluation process.

By identifying these gaps, this research adds to the expanding body of literature focused on improving educational assessment systems. It provides actionable recommendations for academics and educational administrators aiming to enhance the effectiveness of student evaluations. Future research could further explore the implementation of BPMN and RACI frameworks in real-world educational settings to validate their efficacy in improving student evaluations.

References

Anderson, S. (2022, August 16). *Library guides: Systematic reviews: Determine inclusion/exclusion criteria*. Libguides.jcu.edu.au. <https://libguides.jcu.edu.au/systematic-review/criteria>

Angioi, M., & Hiller, C. E. (2023, September). *Systematic literature reviews*. ResearchGate.

Borrego, M., Foster, M. J., & Froyd, J. E. (2014). Systematic literature reviews in engineering education and other developing interdisciplinary fields. *Journal of Engineering Education*, 103(1), 45–76. <https://doi.org/10.1002/jee.20038>

Koym, K. (2022). *LibGuides: Systematic reviews: Inclusion and exclusion criteria*. Libguides.sph.uth.tmc.edu. <https://libguides.sph.uth.tmc.edu/SystematicReviews/InclusionAndExclusion>

Morgan, R. L. (2023). *Research guides: Systematic reviews: Inclusion and exclusion criteria*. Guides.lib.lsu.edu. <https://guides.lib.lsu.edu/c.php?g=872965&p=7866853>

Villegas, F. (2023, January 1). *Educational evaluation: What is it & importance*. QuestionPro. <https://www.questionpro.com/blog/educational-evaluation/>

DOMESTIC PASSENGERS' INTENTION TO USE THE E-TICKETING AND SEAT RESERVATION SYSTEM OF SRI LANKAN RAILWAY

L.G.H.R. Gamage^{1*}

¹*Department of Economics and Statistics, Sabaragamuwa University of Sri Lanka*

Abstract

E-ticketing and seat reservation systems mark a novel experience for passengers in Sri Lanka while enhancing operating efficiency within the country's railway system through the adoption of modern technology. This study adopted a quantitative research approach based on the Theory of Planned Behavior and Technology Acceptance Model. Therefore, the purpose of this study was to investigate the domestic passengers' intention to use the e-ticketing and seat reservation system in the Sri Lankan railway. Furthermore, primary data were collected from 400 passengers at Fort Railway Station using a systematic sampling method. The Structural Equation Modelling was used as the data analysis technique. Results revealed that perceived usefulness, ease of use, and privacy concerns have a significant influence on domestic passengers' intention to use the e-ticketing seat reservation system. Therefore, these findings provide new knowledge for the responsible parties seeking to enhance the e-ticketing and seat reservation system in Sri Lanka.

Keywords: *E-Ticketing and Seat Reservation System, Domestic Passengers' Intention*

*Corresponding author: Tel.: +94 (76) 989301; Email: roshanigamage98@gmail.com

Introduction

The railway is one of the main methods of transportation in the transportation industry. In Sri Lanka, the Sri Lanka Railway (SLR) operates as a public authority under the Ministry of Transport and serves as the country's sole rail transport institution. In addition, Sri Lanka railway caters to the daily transport needs of 3.72 million passengers (Sri Lanka Railways, 2024). With such a large customer base, acquiring train tickets has emerged as a significant challenge. Daily, long queues at the ticket counters of the busy stations, lead to time wastage and numerous difficulties encountered by both local and international travellers due to the current train seat reservation system (Jayasuriya & Nimesha, 2021).

Therefore, implementing an e-ticketing and seat reservation system is a more effective approach to incentivise and utilise public transportation, while also addressing the aforementioned issues (Jayasuriya & Nimesha, 2021). Therefore, the government of Sri Lanka has already installed an e-ticketing and seat reservation system in the Sri Lanka Railway Department, which can bring great benefits (Ministry of transport and highways, 2024).

Nevertheless, Sri Lanka has not yet adopted this newly implemented e-ticketing system. Stations in the Railway Department sell paper tickets (Perera, Nazeer, & De Alwis, 2023). Therefore, it is required to investigate passengers' behavioural intention to use the e-ticketing system (Jayasuriya & Nimesha, 2021). With that purpose, using the technology acceptance model (Venkatesh & Davis, 1996) and the theory of planned behaviour (Ajzen, 1991), this study has hypothesised and tested an integrated model to explain various factors associated with domestic passengers' intention to use the e-ticketing system in Sri Lanka Railways.

Research Problem

What's the domestic passengers' intention to use the e-ticketing and seat reservation system of the Sri Lankan railway?

Research Objective

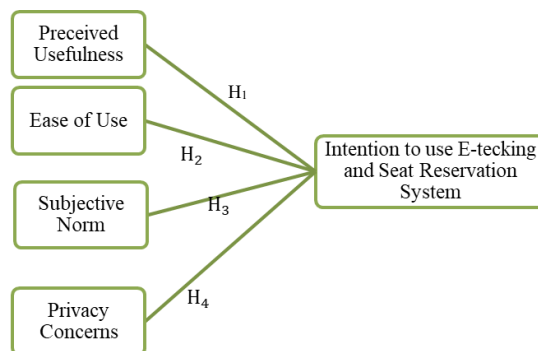
To investigate the intention of domestic passengers to utilise the e-ticketing and seat reservation system of Sri Lankan Railways.

Material and Methods

This study utilised a deductive approach for building hypotheses from existing theories. Therefore, a quantitative research approach was employed based on the theory of planned behaviour (Ajzen, 1991) and the technology acceptance

model (Venkatesh & Davis, 1996). The population of the study was all people who use the railway services in Sri Lanka. Based on population characteristics, Cochran's equation determined the sample size of 404 with a 5% non-response rate. Furthermore, the systematic sampling method was selected as the data collection method (Babbie). The questionnaires were constructed according to the existing theories via previous research studies. Data collected through questionnaires were analysed using Amos software, employing structural equation modelling as the analysis technique.

Figure 1:
Conceptual Framework



Source: Survey Data, (2024)

Results and Discussion

Table 1:
Reliability and Validity of the Data

Construct	Cronbach Alpha
Perceived Usefulness	0.702
Ease of Use	0.898
Subjective Norm	0.691
Privacy Concerns	0.711

Source: Survey Data, (2024)

Note. The Cronbach alpha coefficients of the above table exceed the minimum acceptable level of 0.70, which is recommended for the analysis.

Model Fit Indicators of the Structural Model

When evaluating the fit indices to access the models, the DF/CMIN value should be less than 3 and, RMSEA values $\leq .05$ be viewed for a better model. Moreover, RMR values close to zero suggest a good fit. Further NFI, AGFI, TLI, CFI, RFI, RNI, PGFI, PNFI, the PCFI values range in general from zero

to one, and higher values close to zero indicate a better fit. Therefore, this overall model is acceptable through the significance of all the fit indices as follows.

Table 2:

The Goodness of Fit Indexes

The Goodness of Fit Index	Observed Value
CMIN	2.233
RMESA	0.056
RMR	0.027
TLI	0.976
CFI	0.980
RFI	0.944
NFI	0.965
RNI	0.944
PGFI	0.691
PNFI	0.790
PCFI	0.803

Source: Survey Data, (2024)

Table 3:

Standardised Direct Effects

Construct	Standardised Direct Effects
Perceived Usefulness	.721
Ease of Use	.539
Subjective Norm	-0.04
Privacy Concerns	.031

Source: Survey Data, (2024)

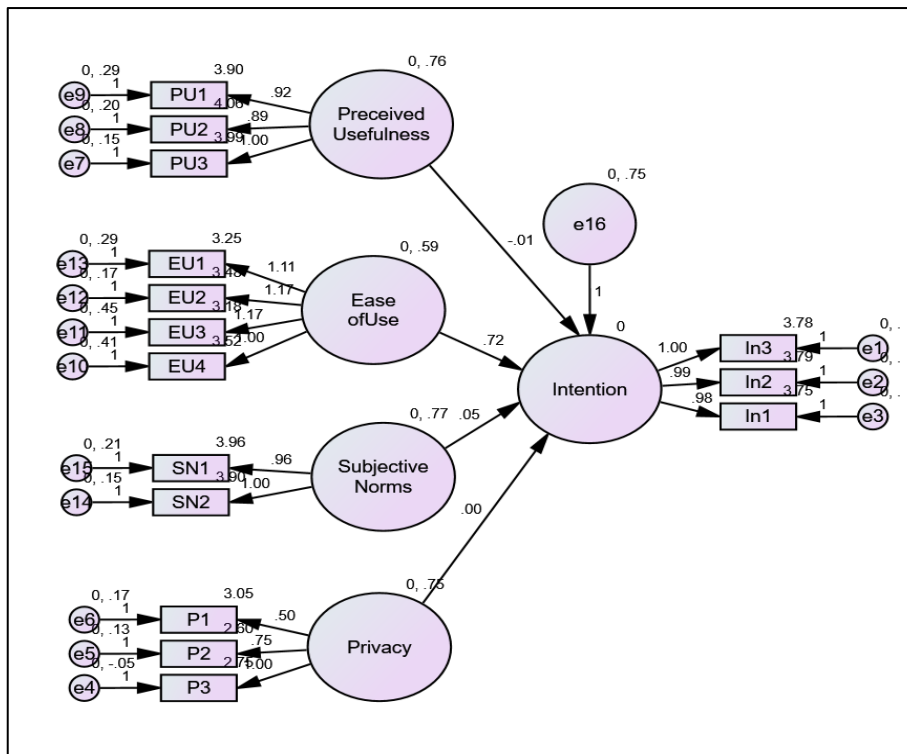
Note. According to the above results, Perceived Usefulness showed the highest direct effect with a value of 0.721, followed by Ease of Use at .539. Subjective Norm and Privacy Concerns also had direct effects with values of -0.04, and 0.031 respectively.

Table 4:

Results of the Path Analysis

Hypothesis	Path	Estimate	S.E.	C.R.	P	Hypothesis Test Result
H ₁	In <--- PU	.589	.067	8.823	***	H1 Supported
H ₂	In <--- EU	.743	.078	9.587	***	H2 Supported
H ₃	In <--- SN	-.006	.065	-.094	.925	H3 Rejected
H ₄	In <--- PC	.031	.005	5.657	***	H4 Supported

Source: Survey Data, (2024)

Figure 2:*Figure of the Structural Model**Source: Survey Data, (2024)*

Conclusion and Recommendations

The study found that the proposed model performed well, by all significant fit indexes. Critical Ratios (CR) for perceived usefulness, ease of use, and privacy concern were 8.823, 9.587, and 5.657 respectively, each exceeding 1.96, indicating significant influence at a 95% confidence level. Therefore, perceived usefulness, ease of use and privacy concerns significantly affect the intention to use the e-ticketing and seat reservation system in the Sri Lankan railway.

However, the CR value for subjective norm was -0.094, below 1.96, indicating no significant influence at a 95% confidence level. Hence, the null hypothesis was not rejected, indicating that subjective norm doesn't significantly influence intention to use the e-ticketing and seat reservation system in the Sri Lanka Railway. The study recommends focusing on enhancing the key variables identified by the model to increase passengers' intentions to adopt the system.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Babbie, E. (n.d.). The basics of social research (4th ed.). Thomson Higher Education. Retrieved August 29, 2021, from <https://nareswari.web.ugm.ac.id/>
- Engel, K. S., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online*, 8(2), 1-24. <https://doi.org/10.1037//1082-989X.8.2.1>
- Jayasuriya, J., & Nimesha, G. (2021). Smart ticketing and seat reservation system for Sri Lankan railway. *KDUIRC*.
- Ministry of Transport and Highways. (2024, June 6). *Ministry of Transport and Highways*. <https://www.transport.gov.lk>
- Perera, M., Nazeer, F., & De Alwis, A. (2023). The customer satisfaction on the railway infrastructure in Sri Lanka: A study on railway stations. *World Construction Symposium*.
- Rajapaksha, R., Hewagamage, C., & Assalaarachchi, L. (2024). Factors affecting the young consumers' intention to use e-ticketing systems in railway service in Sri Lanka. *Business Information Systems Student Symposium*.
- Sri Lanka Railways. (2024, June 2). *Sri Lanka Railways*. <https://www.transport.gov.lk>
- Venkatesh, V., & Davis, F. D. (1996). A model of the antecedents of perceived ease of use: Development and test. *Decision Sciences*, 27(3), 451-481. <https://doi.org/10.1111/j.1540-5915.1996.tb00813.x>

AGRI-XPRT: E-GOVERNANCE APPLICATION FOR BULK PRODUCT DISTRIBUTION IN COVID-19 PANDEMIC ERA

A.W.H.P. Alagalla^{1*}, I.P. Subasinghe², Dulani Jayasssingh³ and U.D.H.L. Perera⁴
^{1, 2, 3, 4} Sri Lanka Institute of Information Technology

Abstract

The complexity of the supply chain plays a crucial role in the fluctuation of market prices in the essential food market. This research focuses on introducing a fully-fledged mobile solution and Web Interface called AgriXpert to the local government and domestic demand to produce all the significant information regarding crops and harvest in various regions. This builds a control mechanism for the market prices of rice/vegetable products. Also, this is an effective solution for pandemic-like situations as it helps to find the areas that have a reasonable harvest to purchase. AgriXpert is aligned with technologies like React Native for the front end and Java, Android, and PHP for the back-end services. Machine Learning algorithm was used for the predictions of market prices of each crop type in different regions. For the transportation cost minimisation in the pickup delivery process, the harvest optimisation model has been utilised here. The pricing model has also been used to monitor the price.

Keywords: *Business Analytics, E-Governance, Machine Learning, Online Shopping Product Distribution*

*Corresponding author: Tel.: +94 (71) 375 8963; Email: heshanalagalla@gmail.com;
<https://orcid.org/0000-0001-8719-8782>

Introduction

There is a significant percentage of people in the country who are engaged in agriculture. Today the number of supportive services like transportation, fertilisers, machinery, etc. heavily influences this business and leads to price fluctuations. With the pandemic travel restrictions and lockdown spread and as a result distribution process was disturbed. Many crops were destroyed as there was no proper way to handle the distribution process (Arrova Dewi & Hayati, 2020; Purnomo, 2021). Hence, this study was conducted to optimally handle bulk product distribution, and the following objectives were also addressed.

- Develop a fully featured web and mobile solution to detect the exact location of farmers with the stocks/ harvest
- Price prediction with accuracy
- Cost-effectiveness and accuracy of the pickup and delivery process
- Facilitate monitoring and analysis of the prices of harvest in various suppliers

Material and Methods

This research is mainly focusing on developing a fully featured software application for bulk distribution and online purchasing in Sri Lanka. All the features have dynamically changing requirements according to the environment. Several features are finalised to be integrated into the product at the end of the development. Those features are displayed in the following Table 1.

Table 1:

Key Features of AgiXpert

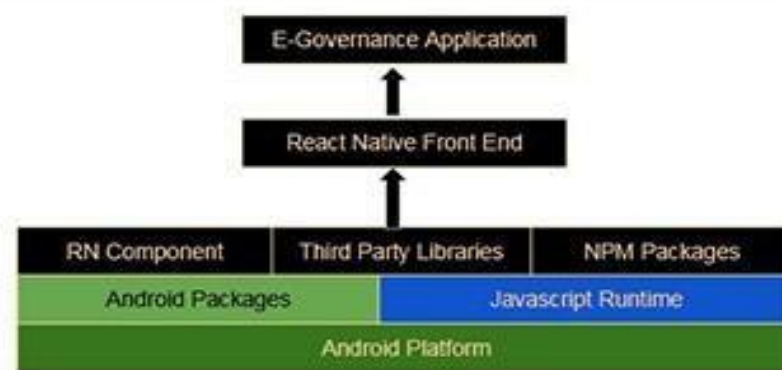
Feature	Description
Login and Registration	Login and register new user options for the farmers, sellers, transporters, intermediate buyers, customers, and government. authorized officers
Search for Available Crops	Users can search the places where crops are available
Analyse Crops Prices	Suppliers and Buyers can analyse the crops and their prices in the regional markets.
Place an Order	Buyers have the option to place an order for a specific crop

Purchase the Crops	Buyers have the option to buy crops and crop-related products from the farmers directly. Payment Gateways are also integrated with the mobile solution (Nugroho, Hendriyanto, & Tisamawi, 2018).
--------------------	--

Figure 1 illustrates the core components of the AgriXpert mobile system. React native, java scripts and NodeJS are the keys used are all executed on Android plate form.

Figure 1:

AgriXpert System Architecture (Nuanmeesri, 2020)



Here, Machine Learning Prediction was introduced to predict the market prices of the next day for the benefit of the Farmers. Then they will be able to give better and more profitable pricing schemes for the collectors/intermediate sellers. The proposed methodology will be comprised of multiple Machine Learning Techniques. Machine Learning (ML)-based prediction is also aligned with the Time Series technique (Nugroho, Hendriyanto, & Tisamawi, 2018; Samarasinghe, Kumara, & Kulatunga, 2021). The time series formula used for the analysis is given in below equation (1), adopted from (Al-Amin, Sharkar, Biswas, & Kaizer, 2020).

Here, the auto-regressive time series model has been utilised for each district separately. Thus, by considering historical data of a single district the researcher was able to predict the price of a particular crop of a selected district with this model.

$$Y_t = \alpha + \beta_1 Y_{t-1} + \beta_2 Y_{t-2} + \dots + \beta_p Y_{t-p} + \epsilon_t \text{-----} (1)$$

Y_t – Predicted price for the period t

α – Constant term

β_i – Coefficient term ($i = 1, 2, \dots, p$)

Y_{t-i} – Actual price of the harvest of the crop for period $t - i$, ($i = 1, 2, \dots, p$)

ϵ_t – Error term for the time period t

Calculation of Transportation cost has been accomplished through equation (2)

$$C_t = \sum_{i=1}^n \sum_{j=1}^m C_{ij} X_{ij} \text{-----} (2)$$

C_{ij} cost of transporting goods from node i to node j

X_{ij} binary variable that is 1 if there is a transport route from i to j ,
and otherwise, 0

The price Monitoring Model is given in equation (3)

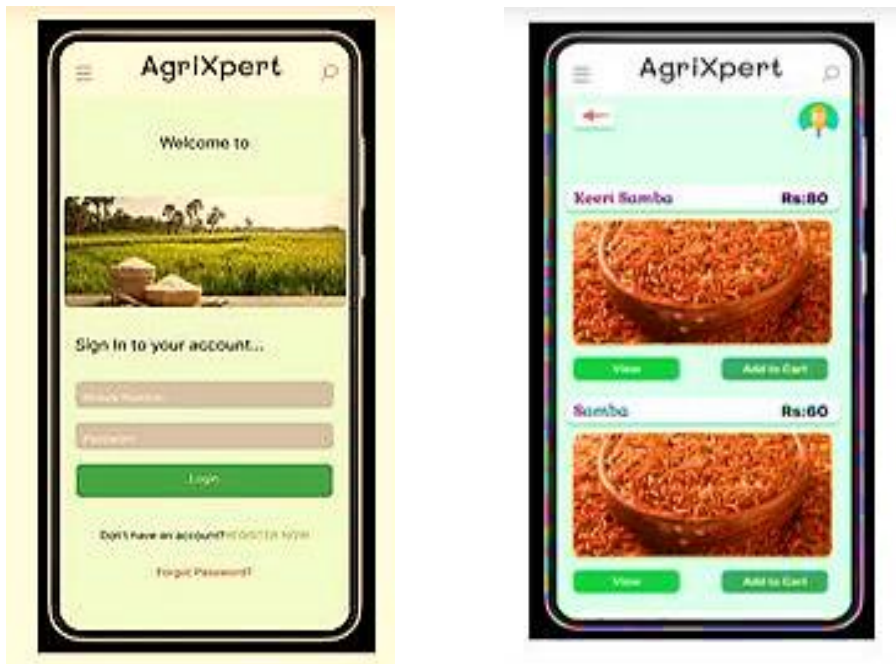
$$P = \sum_{i=1}^n (P_i - P_{gi})^2 \text{-----} (3)$$

P_i current price of product.

P_{gi} government-regulated price of the product.

Results and Discussion

AgriXpert is a web-based online system that provides a better experience to customers. Figure 2 shows the welcome and login screen to the application and displays the dashboard of the AgriXpert. The government or any policy-making body can check the prices of the relevant rice categories and monitor the techniques of selling this rice/vegetable through the system.

Figure 2:*Login and Live Dashboard Information of AgriXpert*

For the process of price prediction, advanced supervised ML techniques were utilised to maintain the required level of accuracy. Table 2 explains the accuracy of each technique that can be utilised. Accordingly, LSTM was selected as the best ML technique for prediction. To implement the Cost-effectiveness objective of the research this system has been designed to avoid the unnecessary expenses for the transportation for suppliers. Suppliers will have the ability to reach the farmers directly without any trouble. Apart from that, farmers can post their best pricing scales by using their accounts in the system.

Table 2:

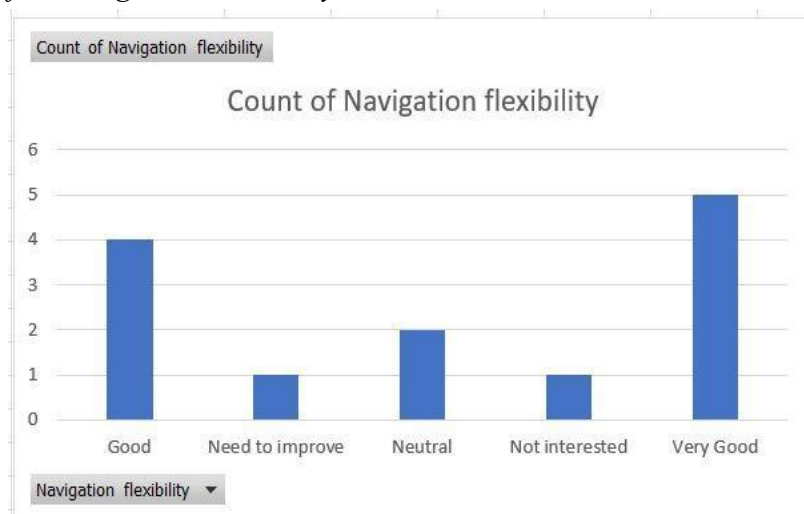
Comparison of Supervised Learning Algorithms with Accuracy (Amjath-Babu, Krupnik, Thilsted, & McDonald, 2020)

Technique	Use Case	Accuracy (%)
Linear Regression	Price Prediction	84.2
Random Forest	Demand Forecasting	88.4
Gradient Boosting (XGBoost)	Price Prediction, Demand Forecasting	91.3
Support Vector Machines (SVM)	Price Prediction, Demand Forecasting	82.6
Neural Networks (LSTM)	Demand Forecasting	93.2

A survey was conducted from a sample of 10 users to collect user feedback. User feedback was collected based on navigation flexibility, interactivity, understandability, data retrieval speed, and usability categories. Navigation refers to the straightforward utilisation and provision of clear directions telling users what they will discover when they click. Interactivity refers to a user's ability to share, add, and edit information, as in the use of a system. Usability refers to the measurement of how users feel about a website.

Figure 3:

Feedback for Navigation Flexibility



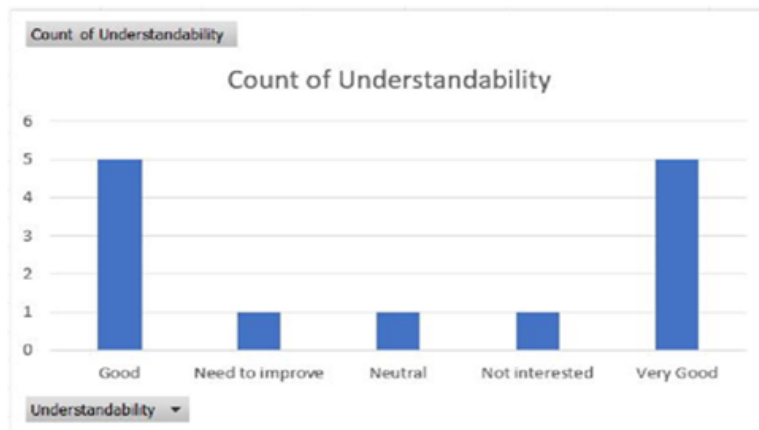
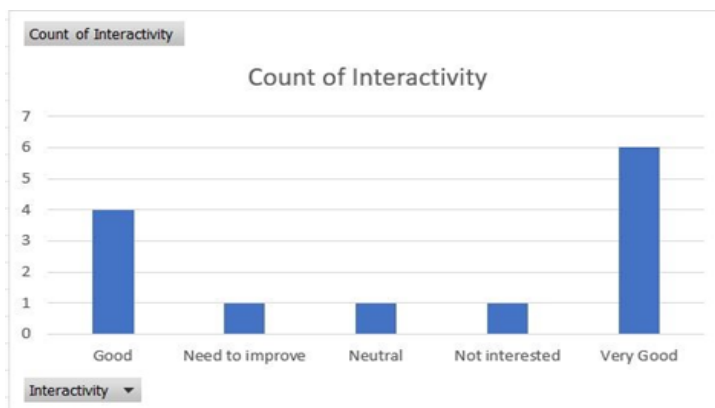
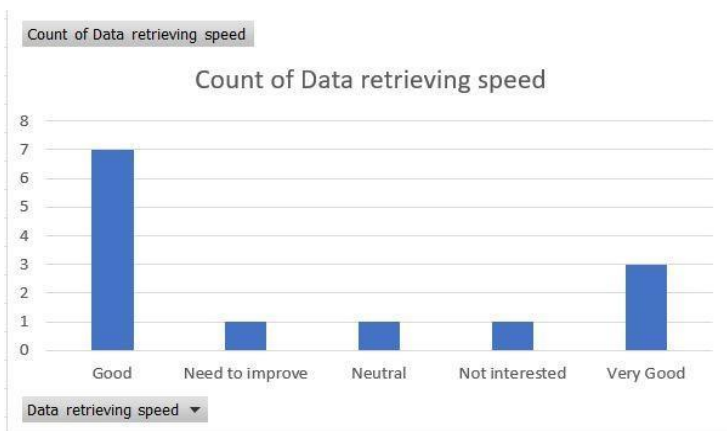
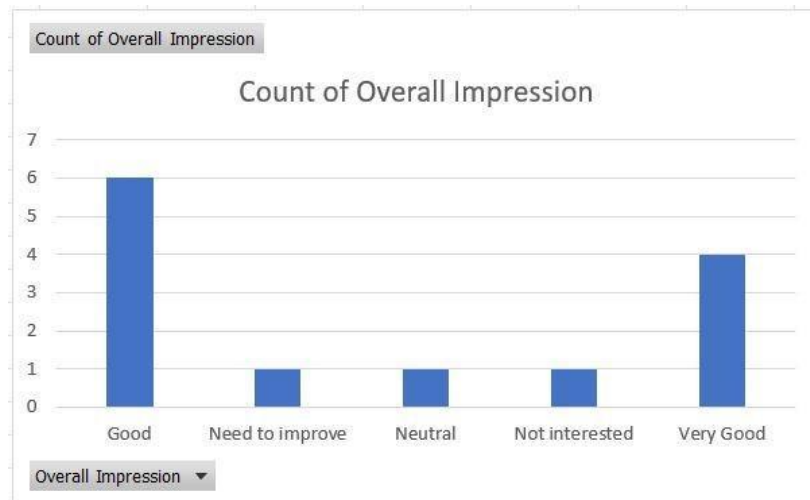


Figure 4:
Feedback for Data Retrieving Speed





Conclusion and Recommendations

AgriXpert, can search for available crops and view more details, including prices, availability, etc. Also, it's able to place an order, can view the livestock available, and can place an order based on user requirements. The system will display predicted prices using ML. All the stakeholders of the Agri industry can register in this system. The most critical function of the system is price control. According to the feedback received from the users, the overall impression of the developed solution was good. Mobile applications and web interfaces could be further developed by adding more prediction layers for the yield of different crops.

References

- Al-Amin, S., Sharkar, S., Biswas, M., & Kaizer, M. S. (2020). Towards a blockchain-based supply chain management for e-agro business system. *Journal of Supply Chain Management*, 13(3), 112-129. <https://doi.org/10.1016/j.jscm.2020.01.007>
- Amjath-Babu, T. S., Krupnik, T. J., Thilsted, S. H., & McDonald, A. J. (2020). Key indicators for monitoring food system disruptions caused by the COVID-19 pandemic: Insights from Bangladesh towards effective response. *Food Security*, 12(4), 717-723. <https://doi.org/10.1007/s12571-020-01083-2>
- Arrova Dewi, D., & Hayati, Z. (2020). A review on agricultural mobile apps for sustainable agribusiness: Before and during COVID-19 pandemic. *Journal of Agricultural Sciences*, 58(3), 224-235. <https://doi.org/10.1016/j.jags.2020.06.004>

Nuanmeesri, S. (2020). Mobile application for marketing, product distribution, and location-based logistics for elderly farmers. *Applied Computing and Informatics*. <https://doi.org/10.1016/j.aci.2019.11.001>

Nugroho, H., Hendriyanto, R., & Tisamawi, K. (2018). Application for marketplace agricultural product. *International Journal of Applied Information Technology*, 7(3), 60-75. Retrieved from <http://journals.telkomuniversity.ac.id/ijait/article/view/1286>

Purnomo, B. (2021). Android-based groceries shopping application. *Zenodo*. <https://doi.org/10.5281/zenodo.5150297>

Samarasinghe, Y. M., Kumara, M., & Kulatunga, A. (2021). Traceability of fruits and vegetables supply chain towards efficient management: A case study from Sri Lanka. *International Journal of Industrial Engineering and Operations Management*, 3(1), 89-106. <https://doi.org/10.1155/2021/6789410>

IDENTIFYING FACTORS INFLUENCING THE PERCEPTION OF PRIVATE UNIVERSITIES IN SRI LANKA (WITH SPECIAL REFERENCE TO KURUNĀGALA DISTRICT)

H.M.I.S. Bandara^{1*}, D.J. Jagoda²

^{1, 2} *Department of Economics and Statistics, Faculty of Social Sciences and Languages,
Sabaragamuwa University of Sri Lanka*

Abstract

Sri Lanka's higher education sector is undergoing significant changes, with an increasing number of students opting for private universities over state universities. Data from the University Grants Commission (UGC) show a steady rise in private university enrollment since the early 2010s. The primary objective of this study was to identify the factors influencing youth perceptions of private universities. Additionally, the study aimed to examine the demographic, economic, and social factors affecting these perceptions. A sample of 384 youth from the Kurunegala district was surveyed using a multi-stage cluster sampling technique. Primary data were collected through a structured questionnaire, and the Binary Logistic Regression model was used as the main analytical tool. The findings revealed that the cost of living and infrastructure significantly influenced perceptions of private universities. Furthermore, 80% of female respondents reported positive perceptions, and a higher proportion of students from semi-government schools also expressed favorable views. However, a larger percentage of rural youth reported negative perceptions. The study provides valuable insights for policymakers and educators, emphasizing the need to improve the quality and accessibility of private higher education in Sri Lanka.

Keywords: *Youth Perception, Higher Education, Private University, Binary Logistic Regression, Sri Lanka*

*Corresponding author: Tel.: +94 (71) 9623878; Email: bandaraimashi@gmail.com

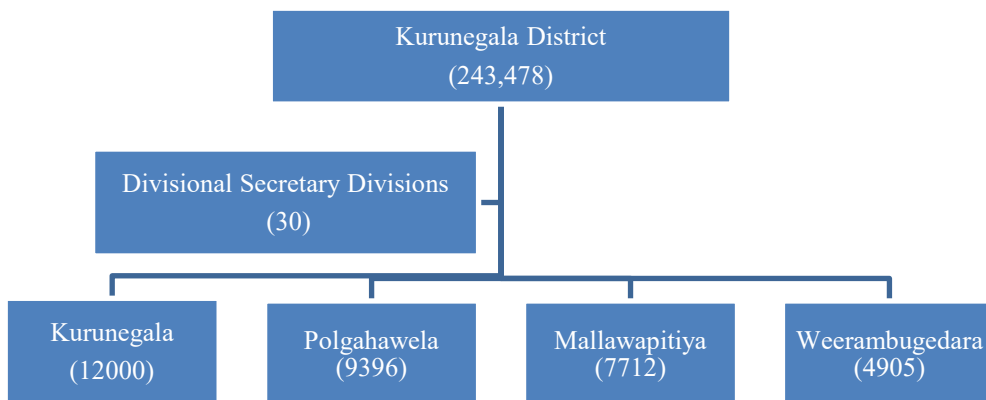
Introduction

Higher education is a key factor influencing an individual's future career path. Selecting a higher education institution is a significant turning point in life, as this decision impacts one's entire future. Moreover, changing this decision later may not be financially feasible and can be highly time-consuming (Waidyasekara, 2015). In the modern globalized era, the higher education system has undergone significant transformations. Universities are now categorized into two main types: state universities and private universities. Private universities differ from state universities in terms of reputation and funding sources, which leads to varied perceptions and practices regarding sustainable development (Wang et al., 2020). Understanding the factors that influence perceptions of private universities in Sri Lanka is essential. Therefore, the primary objective of this study was to explore these factors.

Material and Methods

The study employed both quantitative and qualitative approaches. Primary data were collected through an online questionnaire, while secondary data were obtained from books, magazines, and websites. The dependent variable in this research was youth perception, measured as a dichotomous variable categorized as either "good" or "not good." A sample of 384 youth, aged 20–30 years, was selected using a multi-stage cluster sampling technique from the Kurunegala district, which recorded the highest private university registrations in 2020.

Figure 1:
Sampling Procedure



(Source: Census Department, 2023)

The Binary logistic regression model was used as the main data analysis tool to analyze the collected data. In addition, the Chi-squared test and the One-way ANOVA test were also used as data analysis tools.

Results and Discussion

Table 1 represents the percentage values of some demographic variables in this study.

Table 1:
Independent Variables VS Perception

Independent Variables		Dependent Variable	
		Good	Not Good
Gender	Male	44.38%	55.62%
	Female	79.61%	20.39%
Educational Level	O/L	20.91%	79.09%
	A/L	85.71%	14.29%
	Graduate	70.45%	29.55%
	Diploma	84.09%	15.90%
	Government	60.42%	39.58%
Type of School	Semi-Government	87.50%	12.50%
	Private	85.71%	14.29%
	Urban	72.72%	27.27%
Residence Area	Semi-Urban	80.85%	19.14%
	Rural	42.86%	57.14%

Source: Sample Survey 2024

According to Table 1, 79.61% of female respondents reported positive perceptions of private universities, compared to only 44.38% of male respondents. This indicates that females generally hold more favorable views of private universities in Sri Lanka than males. This disparity may be influenced by the fact that private universities tend to enroll more women, providing them with greater exposure and potentially shaping their perceptions positively, unlike men who may not have had similar experiences.

In terms of educational attainment, individuals with A/L qualifications and diplomas exhibited the highest favorable perception rates, at 85.71% and 84.09%, respectively. Graduates also demonstrated strong positive perceptions, with a rate of 70.45%. Conversely, only 20.91% of those with O/L qualifications reported favorable views, suggesting a strong correlation between higher education levels and more positive perceptions of private universities.

This trend may be attributed to greater awareness, exposure to successful alumni, and enhanced critical thinking skills among those with higher education. These individuals are more likely to evaluate institutional quality and form informed judgments critically. Furthermore, social networks highlighting the benefits of private university education play a significant role in shaping their positive opinions.

According to the type of school attended, students from semi-government schools (87.50%) and private schools (85.71%) reported the highest positive perceptions of private universities, while participants from government schools showed significantly lower positive perceptions at 60.42%. This suggests that semi-government and private school backgrounds may contribute to a more favorable view of private higher education institutions. Schools with better funding typically offer superior facilities and teaching, and students from higher socio-economic backgrounds often have greater access to information and support, which can shape their perceptions of the value of private education.

In terms of area of residence, semi-urban residents exhibited the highest positive perceptions (80.85%), followed by urban residents (72.72%). The variation in perceptions based on residence area can be attributed to factors such as access to information, proximity to private universities, and economic conditions. Urban residents, in particular, often benefit from better resources and exposure, which influence their views on the value of private higher education.

Table: 2
Final Regression Model

Parameter	B	S.E	Wald	df	Sig	Exp.	Reference
Cost of Living			13.903	4	0.008		
Very High	0.229	0.957	4.886	1	0.559	1.661	Very Low
Expensive	-2.152	1.247	5.699	1	0.034	2.218	
Average	-1.275	0.624	4.628	1	0.029	2.096	
Low	-3.468	2.301	4.391	1	0.003	5.001	
Infrastructure Facilities			12.144	4	0.016		
Very Good	4.087	1.645	6.171	1	0.002	0.017	Very Bad

Good	1.987	1.235	2.587	1	0.049	1.235
Neutral	0.408	1.301	0.098	1	0.754	1.503
Bad	2.669	0.846	10.110	1	0.001	0.318
Constant	-1.886	0.977	14.258	1	0.000	0.072

Source: Sample Survey 2024

The binary logistic regression model was employed to identify the factors influencing youth perceptions of private universities in Sri Lanka. The results, presented in Table 2, highlight the key determinants shaping these perceptions.

The analysis revealed that the cost of living associated with private universities and their infrastructure facilities were significant factors. Compared to those who perceive the cost of living at private universities as very low, individuals who consider it high demonstrated a 38.1% decrease in positive perceptions. Similarly, individuals in the average and low cost-of-living groups showed an 11% and 90% decrease, respectively, in favorable perceptions of private universities.

Infrastructure facilities also played a critical role. Compared to those who view infrastructure at private universities as very bad, individuals who perceive it as very good exhibited a 38% increase in positive perceptions. Likewise, those in the good and bad groups showed a 28% and 62% increase, respectively, in favorable perceptions of private universities.

Conclusion and Recommendations

The cost of living and infrastructure facilities at private universities play a significant role in shaping youth perceptions. The high cost of living associated with private universities tends to create negative perceptions, whereas their infrastructure facilities often contribute to positive perceptions.

Higher levels of education are associated with more favorable views of private universities. Additionally, students from semi-government and private school backgrounds tend to have a more positive perception compared to those from government schools. However, rural youth are less likely to hold favorable views, highlighting a potential urban-rural divide.

The negative perception of private universities in Sri Lanka largely stems from the high cost of living. Statistics reveal that many families struggle with the financial burden of tuition fees and living expenses. For example, the annual cost of studying abroad is approximately Rs. 10 million, compelling parents

to make significant sacrifices to fund their children's education. This financial strain reduces student satisfaction, discourages enrollment, and ultimately jeopardizes the long-term sustainability of these institutions. If such negative perceptions persist, private universities may face difficulties in attracting students, which could hinder their growth and overall contribution to higher education.

Addressing these challenges requires targeted actions. Private universities should focus on modernizing infrastructure, including upgrading classrooms with advanced technology, enhancing laboratories and libraries, and expanding sports and extracurricular facilities. Moreover, introducing scholarship programs and financial aid packages, particularly for students from underprivileged backgrounds can help ease the financial burden on families and improve access to private higher education.

These measures can help private universities improve their reputation, attract a broader student base, and ensure their sustainability in Sri Lanka's higher education sector.

References

- Department of Census and Statistics. (2023). *Department of Census and Statistics*. Retrieved from <http://www.statistics.gov.lk/Publication/newPage#gsc.tab=0>
- Waidyasekara, V. T. (2015, March). *Analysing the significant factors which are affected to the selection of higher education opportunities in the private institutions*. Retrieved from <http://dl.lib.uom.lk/bitstream/handle/123/13840/TH3093.pdf?sequence=12&isAllowed=y>
- Wang, J., Yang, M., & Maresova, P. (2020, March 11). Sustainable development at higher education in China: A comparative study of students' perception in public and private universities. *Sustainability*. Retrieved from <https://www.mdpi.com>

SOCIAL MEDIA AND ACTIVISM: A NETWORK ANALYSIS OF THE BLACK LIVES MATTER MOVEMENT

A.C. Nanayakkara^{1*}, G.A.D.M. Thennakoon²

^{1, 2} *Sabaragamuwa University of Sri Lanka*

Abstract

This research explored the diffusion of information on social media, employing Social Network Analysis (SNA) to study YouTube comments related to the Black Lives Matter (BLM) movement, specifically in the context of George Floyd's death. By analysing key centrality measures such as in-degree, out-degree, closeness, and betweenness, the study provided significant insights into user behavior, social influence, and the roles of influential community figures in activism. The results emphasised the crucial role of social media in spreading information, creating supportive communities, and fostering inclusivity. Despite challenges like misinformation and algorithmic biases, the BLM movement exemplified how social media could reshape civic engagement and challenge systemic inequities. These findings offered valuable implications for researchers, policymakers, and social media professionals navigating the intersection of digital platforms and activism. Ultimately, the study highlights the importance of harnessing social media's potential for positive change while addressing its inherent challenges.

Keywords: *Black Lives Matter Movement (BLMM), Centrality Measures, Information Diffusion, Social Media Activism, Social Network Analysis (SNA)*

*Corresponding author: Tel.: +94 (71) 861 3988; Email: chethana@ccs.sab.ac.lk;
<https://orcid.org/0000-0001-7111-2233>

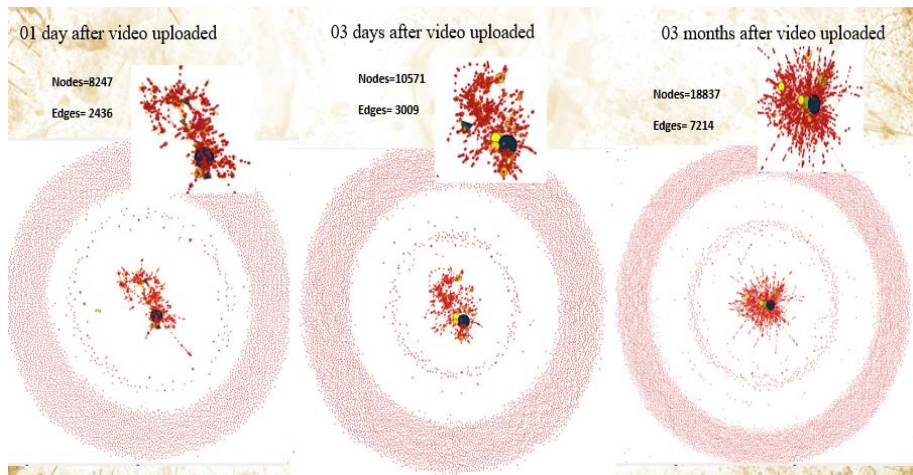
Introduction

The digital era has revolutionised citizen participation in social justice movements, with social media platforms acting as critical tools in shaping discourse and mobilizing action (Boyd, 2014). These platforms have not only democratized the flow of information but also empowered individuals to engage in activism in unprecedented ways. This study investigates the Black Lives Matter Movement (BLMM) as a case study to explore how social media has transformed activism. By examining interactions within online communities, it aims to understand how digital platforms amplified marginalized voices, fostered global solidarity, and transcended geographical barriers (Freelon et al., 2016; Himelboim et al., 2013). The research focuses on the dynamics of online engagement, highlighting how users utilise social media to challenge systemic injustices and mobilise collective action. Ultimately, this study seeks to contribute to the broader understanding of the intersection between digital communication and social movements, illustrating the profound impact of social media on contemporary activism.

Material and Methods

This research utilised Social Network Analysis (SNA) to study YouTube comments related to the video *How George Floyd Was Killed in Police Custody | Visual Investigations*. The YouTube API was used to collect comments, which were categorized into five-time clusters. Network diagrams were created using the Force Atlas 02 layout, with nodes representing users and edges symbolizing interactions between them. Centrality measures were applied to detect key influencers and understand the evolution of network structures over time (Marwick & Boyd, 2011).

The network diagrams (Fig. 1) revealed the growth of user interaction over time: one day, three days, and three months after the video's upload. Color-coded in red-yellow-green (RYG) to signify varying levels of activity or influence, the diagrams illustrated how social media engagement evolved as the content reached broader audiences.

Figure 1:*Initial Design of 03 Network Diagrams by Using Force Atlas 02 Design Layout*

Results and Discussion

The analysis of YouTube comments provided critical insights into the diffusion of information and the role of key influencers within the BLMM's comment networks.

Influence and Authority: Key entities with high centrality, such as news outlets and prominent users, played pivotal roles in shaping the network's discourse. Metrics like betweenness and closeness centrality were crucial for understanding the roles of brokers and those who facilitated information exchange. Importantly, centrality was not solely determined by the number of connections but by the strategic positions of nodes within the network (Freelon et al., 2016; Tufekci, 2017).

Temporal Shifts in Engagement: The temporal analysis of the comment network revealed distinct periods of heightened activity corresponding to major events related to the BLMM. Initially, there was a surge in user engagement within the first 24 hours following the video upload, known as the "Golden Hour," where 8,247 nodes and 2,436 edges indicated a rapid response, though interactions were largely concentrated in small, tightly connected clusters. By the third day, referred to as the "Silver Hour," the network expanded to 10,571 nodes and 3,009 edges, illustrating broader user engagement. Over time, while the overall activity decreased, the network displayed increased but decentralised participation, with 6,720 nodes and 7,214 edges by the end of the first week. After three months, the network's structure had grown to 18,837 nodes and 7,214 edges, reflecting sustained

interest in the video and its associated issues. The conversations continued to persist, indicating ongoing engagement with the movement's themes despite fluctuations in activity.

Community Building and Solidarity: The research identified clusters of tightly connected users who shared common themes such as justice, solidarity, and systemic racism. These communities were integral in sustaining the movement's momentum and fostering action, as social media facilitated the dissemination of information and the creation of supportive networks (Boyd, 2014; Tufekci, 2017).

Challenges and Misinformation: Despite the overall positive influence of social media, the analysis highlighted the presence of misinformation and polarising content. Certain nodes with high centrality were responsible for disseminating misleading information, underscoring the need for fact-checking mechanisms and media literacy to combat misinformation in online activist spaces (Freelon et al., 2016; Marwick & Boyd, 2011).

Conclusion and Recommendations

This study underscored the transformative power of social media in mobilising social justice movements, using the BLMM as a case study. Key findings included the importance of prominent users, the role of community building in maintaining momentum, and the challenges posed by misinformation. The research challenged traditional assumptions about network centrality by highlighting the nuanced roles of hub nodes in information dissemination. Furthermore, it stressed the importance of understanding the evolving dynamics of online activism, particularly the temporal shifts in engagement.

Future research should have delved deeper into semantic network analysis to better understand the content and themes driving social movements. Policymakers and social media platforms should have considered these insights to enhance their engagement strategies and support positive activism while mitigating the risks of misinformation. The study provided a comprehensive framework for examining the intersection of digital platforms and activism, offering practical implications for future social justice movements.

References

- Boyd, D. (2014). *It's complicated: The social lives of networked teens*. Yale University Press.
- Freelon, D., McIlwain, C. D., & Clark, M. D. (2016). *Beyond the hashtags:*

#Ferguson, #BlackLivesMatter, and the online struggle for offline justice. Center for Media and Social Impact. Retrieved from https://cmsimpact.org/wpcontent/uploads/2016/03/beyond_the_hashtags_2016.pdf

Himmelboim, I., McCreery, S., & Smith, M. (2013). Birds of a feather tweet together: Integrating network and content analyses to examine cross-ideology exposure on Twitter. *Journal of Computer-Mediated Communication*, 18(2), 154-174. <https://doi.org/10.1111/jcc4.12001>

Marwick, A. E., & Boyd, D. (2011). To see and be seen: Celebrity practice on Twitter. *Convergence*, 17(2), 139-158. <https://doi.org/10.1177/1354856510394539>

Tufekci, Z. (2017). Twitter and tear gas: *The power and fragility of networked protest*. Yale University Press.

TRACK 03
GEOGRAPHY AND ENVIRONMENTAL
MANAGEMENT

PLENARY SPEECH

Geography & Environmental Management

Prof. A. Krishna Kumari

**Department of Geography
Sri Krishnadevaraya University
Andhra Pradesh, India**



Geography and environment are the studies which include human habitations, people, their surrounding environments and the landscapes. The interaction between physical phenomenon and human societies is the basic aim and chief component of Environmental Geography. Our very survival in this planet earth depends on the proper management of these phenomena.

Global warming, increased greenhouse gases, ozone depletion, acid rains, increased population in the developing countries, concrete jungles, changes in demographic dividend, floods, famines etc. are the matters of concern in Geography and Environmental studies at global scenario. Environmental Geography also considers the study of the environmental sustainability and well-being apart from the aspects like societal power, cultural identities and political economy. Geographers and Environmental Scientists use analytical and GIS tools to measure the impact of human activity on natural landforms, cycles, processes and phenomena. Geography particularly helps us to understand our environment and make changes in response to issues like global warming. It can also help us in the prediction of natural disasters, understand how weather systems work and learn about natural phenomena. Geographers have a long tradition of exploring how the earth's physical and human environments are constantly changing.

Environmental management involves planning, resource conservation, evaluation, legislation and administration to support sustainable development. It is a multidisciplinary practice that aims to protect nature from potentially damaging operations, conserve resources and reduce negative impacts on the environment.

At the global level, many organisations procure information on the environmental aspects. The US Geographical Survey (USGS) provides information about natural hazards, water, energy, minerals and other natural resources. India's National Natural Resources Management System (NNRMS) manage the country's natural resources in an integrated manner

using Remote Sensing and GIS techniques.

Many International Organisations are rendering their services in the Conservation and Management of Environment and its resources where many scholars including geographers are extending their cooperation to fulfil the objectives and aims. United Nations Environment Programme (UNEP) sets global regulations for environmental issues and works to improve sustainable development. Green Peace, another global organisation focuses on nonviolent action to stop environmental crimes, such as reducing plastic in the oceans.

In India, many of the tribal communities such as Sarnas, Mundas, Santhals, Birhors, Chenchus etc., worship Nature especially sacred groves, animals and other natural elements. While cutting the dried stems of the tree for firewood, these tribes pray to nature and offer excuses for separating them from the main tree. Many such examples appear worldwide from the human societies both in positive and negative way to conserve and manage the environment knowingly or unknowingly.

18 December 2024

AN ANALYSIS OF URBAN GROWTH ON LAND SURFACE TEMPERATURE AND URBAN HEAT ISLAND EFFECT IN KURUNĀGALA MUNICIPAL COUNCIL AREA, SRI LANKA

K.P.U.M. Jayananda^{1*}, K.B.P.C.A. Wijerathne²

^{1, 2} *Department of Geography and Environmental Management, Sabaragamuwa University of Sri Lanka*

Abstract

This study is conducted to identify the relationship between Urban Growth, Land Surface Temperature (LST), and the Urban Heat Island (UHI) effect in the Kurunegala Municipal Council Area (KMCA). Using Landsat 8 images, findings were analysed by Arc Map and multiple regression. UHI hotspots were found by locating areas where LST values were much higher than the average. The findings revealed a noticeable increase in Normalised Difference Buildup Index (NDBI) values from 0.42407 in 2014 to 0.45070 in 2024, meaning urban areas grew. Normalised Difference Vegetation Index (NDVI) values decreased, from 0.416 in 2014 to 0.340 in 2024, showing less plant cover. The average LST also rose from 22.5°C in 2014 to 35.0°C in 2024. The regression analysis shows NDVI and NDBI consistently exhibited statistically significant coefficients with LST. NDBI tended to have a higher standardised coefficient compared to NDVI. Kurunegala town centre experiences strong heat islands and higher LST values. Impact awareness programmes, mixed land use systems, and improving green infrastructures with sustainable urban development strategies are essential to mitigate the effects.

Keywords: *Kurunegala Municipal Area, Land Surface Temperature, Normalised Difference Built-Up Index, Urban Growth, Urban Heat Island*

**Corresponding author: Tel.: +94 (71) 395 4591; Email: umaduwanthi20@gmail.com; <https://orcid.org/0009-0007-1737-5633>*

Introduction

Sri Lanka has been a developing country for many years, and the Kurunegala Municipal Council Area (KMCA) is one of the main urban centres in the Kurunegala District. From 1996 to 2019, KMCA experienced rapid urbanisation with the expansion of impervious surfaces, as noted by Ranagalage et al. (2020). The Climate Technology Centre & Network reported that Kurunegala has been negatively affected by climate change, with significant land use changes for commercial purposes and limited residential growth (Kurunegala Town Development Plan, 2006). This study focuses on urban growth in KMCA to explore how it affects Land Surface Temperature (LST) and the Urban Heat Island (UHI) effect. The chosen period helps to analyse recent trends while overcoming the issue of missing clear Landsat images. This research is important for understanding the connection between urban growth, LST, and the UHI effect in KMCA, contributing to sustainable urban development and climate resilience.

Material and Methods

The UHI effect was quantified by comparing LST values to the mean LST of the study area, with UHI intensity defined as areas where LST exceeded the mean by more than one standard deviation. This methodology aligns with previous studies (Rahaman, 2022) on UHI quantification. Areas with consistently higher LST values were classified as potential UHI zones.

This study is based on secondary data, mainly Landsat 8 satellite images and literature reviews. Satellite images were downloaded using the USGS from 2014 to 2024, using Landsat Collection 2 Level 1 and Landsat Collection 2 Level 2 using Landsat 8-9 OLI/TIRS C2 L1 sensors. Data pre-processing was done prior to classification to mitigate the errors related to cloud cover. For analysis, specific equations and statistical techniques were used.

Table 1:

Details of Landsat Data Collected from the United States Geological Survey

Acquisition Date	Bands	Resolution (Meters)	Path	Row	Cloud cover
2014.03.10	Band 4	30	141	55	9%
	Band 5	30			
	Band 6	30			
	Band 10	100			
2017.01.13	Band 4	30	141	55	10%
	Band 5	30			
	Band 6	30			

	Band 10	100			
2020.03.10	Band 4	30	141	55	8%
	Band 5	30			
	Band 6	30			
	Band 10	100			
2024.02.18	Band 4	30	141	55	9%
	Band 5	30			
	Band 6	30			
	Band 10	100			

Source: Metadata of Landsat Satellite Images of 2014, 2017, 2020 and 2024

Equation 1: The NDBI has been calculated using Band 5 (NIR) and Band 6 (SWIR).

$$NDBI = Float\left(\frac{Band\ 6 - Band\ 5}{Band\ 6 + Band\ 5}\right)$$

Equation 2: The NDVI has been calculated using the NIR band (Band 5) and RED band (Band 4).

$$NDVI = Float\left(\frac{Band\ 5 - Band\ 4}{Band\ 5 + Band\ 4}\right)$$

Calculating the LST and UHI intensity process is synthesised below. (Rahman et al., 2022).

Equation 3: Calculation of LST and UHI done by Converting the Top of Atmosphere (TOA) to Radiance. $L\lambda$ denotes the TOA, ML denotes the Radiance Multiplicative Band number, AL denotes the Radiance Add Band, Q_{cal} denotes the pixel values and O_i denotes the correction value for band 10.

$$L\lambda = ML * Q_{cal} + AL - O_i$$

Equation 4: Brightness Temperature (BT) in Celsius were calculated by converting the ToA to BT. $K1$ denotes $K1_CONSTANT_BAND_10$ and $K2$ denotes $K2_CONSTANT_BAND_10$.

$$BT = \frac{K2}{Ln\left(\frac{K1}{L\lambda} + 1\right)} - 273.15$$

Equation 5: PV value is calculated using calculated NDVI values.

$$PV = \left(\frac{(NDVI - NDVI_{min})}{(NDVI_{max} - NDVI_{min})}\right)^2$$

Equation 6: Land Surface Emissivity (LSE) is calculated using calculated PV

and specific values.

$$LSE = 0.004 * PV + 0.986$$

Equation 7: The LST is calculated using BT and LSE. C2 denotes constant values and velocity of light.

$$LST = BT / (1 + \left(\lambda * \frac{BT}{c^2} \right) * \ln(LSE))$$

Equation 8: The UHI effect is calculated using LST, Mean LST values, and Standard Deviation of temperature.

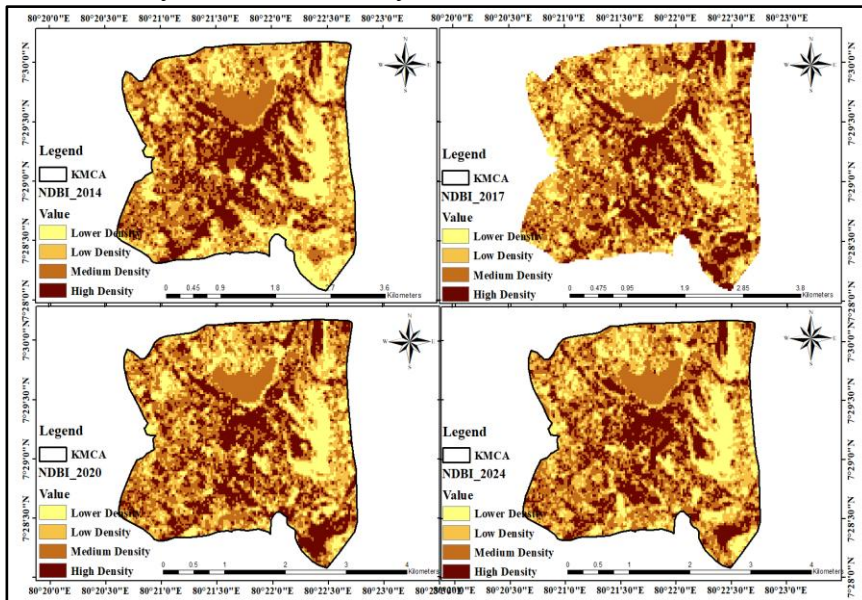
$$UHI = (LST - LST_{mean}) / SD$$

The Multiple Linear Regression Model is used to identify the most influential factor for increased LST. 311 sample points were generated using the Fishnet tool in the Arc toolbox.

Results and Discussion

Figure 1:

NDBI Classification in KMCA from 2014 to 2024

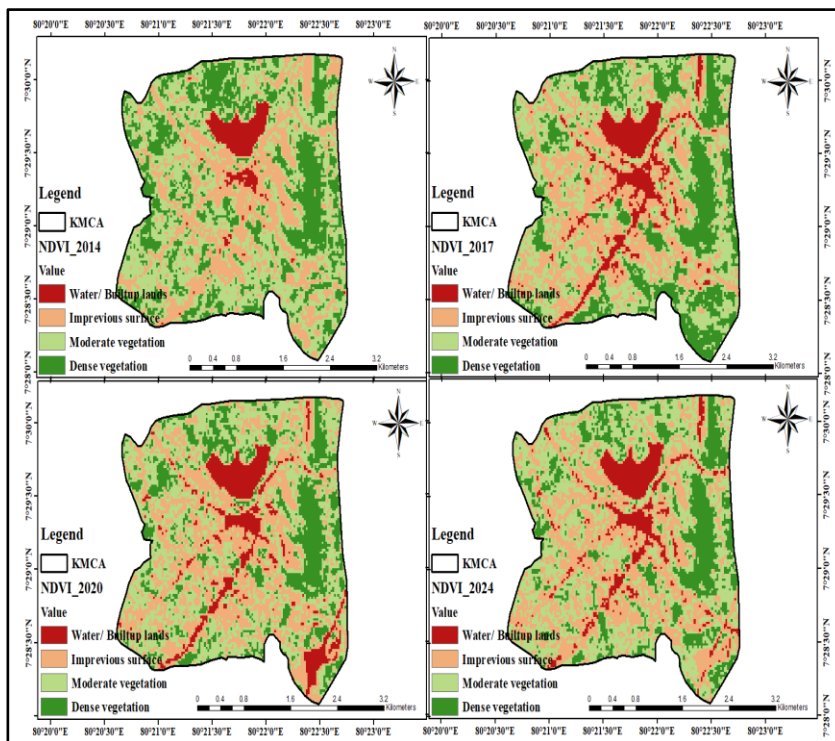


Source: Created by Author based on NDBI Classifications

Dense built-up areas have emerged in the southwest plain of KMCA, highlighting urban growth between 2014 and 2024. NDBI values rose from -0.460130 to 0.42407 in 2014, increasing to -0.140831 and 0.44207 by 2020, and reaching -0.250227 to 0.45070 in 2024. According to the Urban

Development Authority (UDA, 2006) and Lugoda (2021), road and Central Expressway developments improved connectivity between Kurunegala and major cities like Colombo, Trincomalee, and Kandy. KMCA is a key commercial and administrative hub, with 2,080 commercial and government institutions. The Kurunegala Lake Circle Development Project has led to increased recreational and residential activities around the lake, further driving commercial growth.

Figure 2:
NDVI Classification in KMCA from 2014 to 2024



Source: Created by Author based on NDVI Classifications

Table 2:
Vegetation Area Density Classification, NDVI KMCA

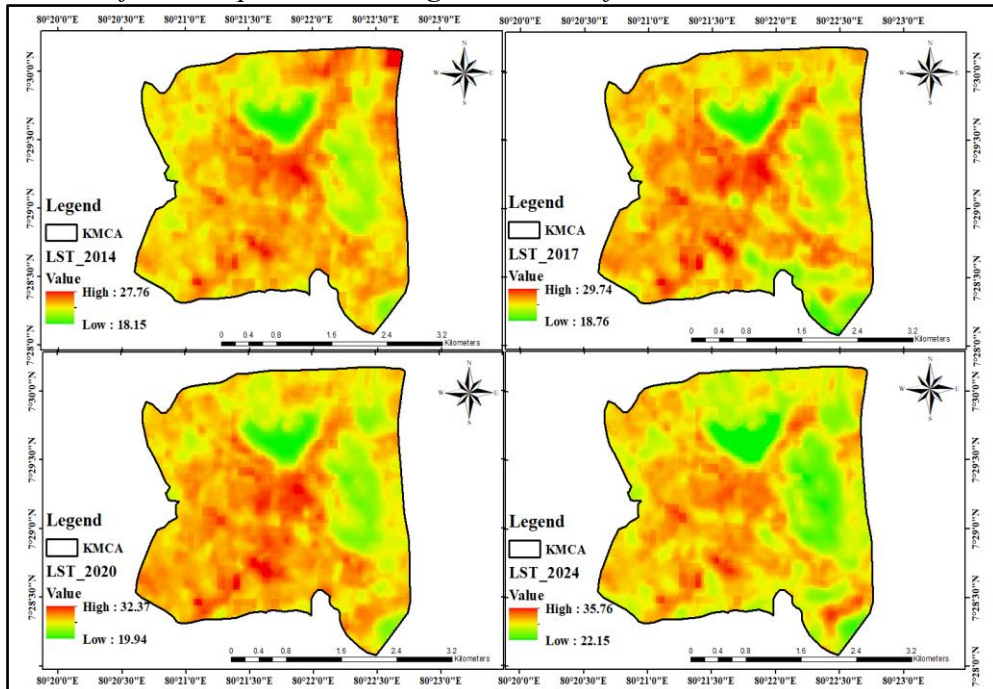
No.	Value	Classification
1	>-0.009	Water and Built-up lands
2	<-0.660	Impervious surface
3	<0.158	Moderate vegetation
4	<0.340	Dense vegetation

Source: Created by Author Based on NDVI Calculation

Higher values represent the dense vegetation areas and lower values represent water and built-up areas. In 2014, the values ranged from -0.054 to 0.416, and by 2020, they dropped to -0.039 to 0.342. In 2024, they slightly improved from -0.009 to 0.340. With the rapid urban growth, vegetation cover declined. The eastern part of the city has remained with dense vegetation. More than half of the land extent is covered with impervious surfaces.

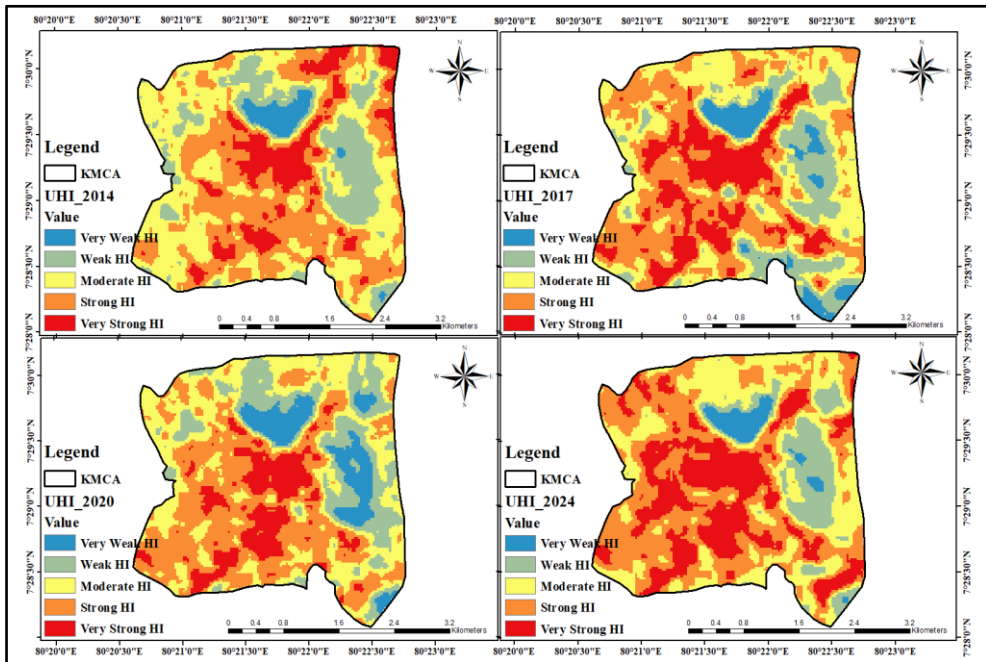
Figure 3:

Land Surface Temperature Changes in KMCA from 2014 to 2024



Source: Created by Author based on LST Classifications

The findings of the study showed notable changes in NDBI and NDVI. Relatively, NDBI has a high impact on temporal changes in LST within the KMCA. The results clearly show a consistent decrease in NDVI, indicating a loss of vegetation, and an increase in NDBI, reflecting urban expansion. The mean LST increased significantly over the 10 years. In 2014, the highest recorded temperature was 27.76°C, while the lowest was 18.15°C. By 2024, the maximum temperature increased to 35.76°C, and the minimum temperature rose to 22.06°C. This showed a notable increase in temperatures and substantial warming trends in KMCA.

Figure 4:*Potential Areas for UHI Effect in KMCA from 2014 to 2024**Source: Created by Author based on UHI Classifications***Table 3:***Urban Heat Island Intensity Values, UHI-KMCA*

No	Value	Classification
1.	>-1	Very weak heat island
2.	-1 – 0.5	Weak heat island
3.	-0.5 - 0	Moderate heat island
4.	0-1	Strong heat island
5.	<1	Very strong heat island

Source: Based on Landsat Images 2014, 2017, 2020, 2024

When considering the UHI effect, it is mostly in high density of built-up areas. Kurunegala town center area experiences very strong heat islands and higher LST values. Kurunegala town West direction, Kurunegala town South and Kurunegala town North areas have a high density of built-up areas. These areas experience a strong heat island effect compared to the Kurunegala town centre. Kurunegala East direction and Kurunegala Town Northeast direction mostly experience weak heat island intensity. That means this area has lower LST and NDBI values with higher NDVI values. These areas experience less heat compared to the Kurunegala town centre.

Table 4:*Summary of Regression Models*

Year	Sum of squares	F	Sig.
2014	333.790	70.685	.000
2017	348.726	67.096	.000
2020	511.845	58.647	.000
2024	501.034	54.144	.000

Source: Created by Author based on Regression Analysis

The regression models showed highly significant F-values with corresponding p-values less than 0.001, representing strong evidence against the null hypothesis. Both NDVI and NDBI consistently exhibited statistically significant coefficients with LST across all years, highlighting the strong relationships between variables. NDBI tended to have a higher standardised coefficient compared to NDVI. It implies a relatively stronger influence on LST within the models.

Conclusion and Recommendations

The main objective of this investigation is to find out how urban expansion affects LST and how the UHI effect affects KMCA. This includes examining the urban expansion over time and influence of temperature patterns and the heat island effect in the region. This research aims to identify the trends of NDBI and NDVI indices related to urban growth and how NDBI and NDVI influence the increase of LST making it vulnerable for Heat Islands within KMCA. In conclusion, the study highlights the significant relationship between urban growth, LST, and the UHI effect in KMCA from 2014 to 2024. NDBI values increased from -0.460130 to 0.45070. In 2014, the values ranged from -0.054 to 0.416, and by 2020, they dropped to -0.039 to 0.342. In 2024, they slightly improved from -0.009 to 0.340. With the rapid urban growth, vegetation cover declined. The mean LST rose from 22.5°C in 2014 to 35.76°C in 2024, showing a notable warming trend. Areas with high NDBI values, particularly in the town centre, West, South, and North, experienced stronger UHI effects. Regression analysis confirmed that NDBI has a stronger influence on LST compared to NDVI, highlighting the connection between urbanisation and rising temperatures in KMCA.

To overcome this problem, awareness programmes and improvements in green infrastructures within the identified UHI Hotspot areas, along with encouraging mixed land use for residents and a sustainable urban development plan, can mitigate unplanned urban expansion. Additionally, there should be a responsible organisation to observe climate change variations.

References

Lugoda, U. (2021). *Kurunegala Lake Circle Development Project*.

Rahman, M., Rony, R., Jannat, F., Pal, S., Islam, S., & Islam, T. (2022). Impact of urbanization on urban heat island intensity in major districts of Bangladesh using remote sensing and geospatial tools. *Climate*, 10(1), 1–32. <https://doi.org/10.3390/cli10010004>

Ranagalage, M., Rathnayake, S., Dissanayake, D., Kumar, L., Wicramasinghe, H., Vidanagama, J., & Muthunayake, P. (2020). Spatiotemporal variation of urban heat islands for implementing nature-based solutions. *International Journal of Geo Information*, 9(7), 461. <https://doi.org/10.3390/ijgi9070461>

Urban Development Authority. (2019). *Climate change adaptation action plan for Kurunegala*. Kurunegala: Urban Development Authority. Retrieved March 10, 2024.

Urban Development Authority. (2006). *Kurunegala town development plan*. Kurunegala: Urban Development Authority.

STUDY THE TEMPORAL CHANGES OF LAND COVER AND ITS RELATION TO LANDSLIDES IN THE BADULLA DIVISIONAL SECRETARIAT DIVISION

B.A. Egodage^{1*}, K.B.P.C.A. Wijerathne²

^{1, 2} *Department of Geography and Environmental Management,
Sabaragamuwa University of Sri Lanka.*

Abstract

This study aimed to investigate the spatiotemporal changes in land cover from 2007 to 2023 and their relation to landslide occurrences in the Badulla Divisional Secretariat Division (DSD), a region in Sri Lanka known for its vulnerability to landslides. This study employed a supervised classification technique and systematic change detection analysis, along with landslide location data. The results indicate a significant reduction in vegetative cover and expansion in built-up areas. A total of 11.46 km² of areas were converted from vegetation to built-up areas. There was an increase in landslide incidents in urban areas over time. It increased from 9 occurrences in 2007–2015. Then 23 from 2015–2023. Areas that maintained vegetation coverage experienced 28 landslides. Most of these occurred near regions that either remained consistently built-up or had transitioned from vegetation to built-up. Therefore, this study concludes that ongoing land cover changes increase the landslide vulnerability in the Badulla DSD.

Keywords: *Change Detection, Badulla DSD, Landslides, Land Cover, Supervised Classification*

**Corresponding author: Email: baegodage@std.ssl.sab.ac.lk;*

Introduction

It is essential to analyse the relationship between land cover change and landslide occurrences because landslides are aggravated by anthropogenic activities that destroy and change the land cover. Badulla DSD has been identified as a landslide hotspot (Sivagurunathan, 2022). However, despite the clear linkage between the changes in land cover and landslide occurrences, there is still a lack of knowledge of the temporal patterns of land cover dynamics and their particular association with landslides in the Badulla DSD. Therefore, this study aims to understand the temporal changes in land cover and their relationship with landslides in the Badulla DSD.

Material and Methods

Primary data were obtained through interviews. The participants for these interviews were selected using the purposive sampling method. Secondary data were collected from the resource profile (Badulla DSD-2023), scholarly articles, and reliable websites. Satellite imagery was acquired from the USGS Earth Explorer (Table 1). Landslide data, rainfall data, and soil data were obtained from the National Building Research Organisation (NBRO), Department of Meteorology, and Land Use Planning Department in Badulla. Topographical data and hydrological data were collected from the Survey Department of Sri Lanka.

Table 1:

Information of Data Used to Create Land Cover Maps

Types of data	Acquisition Date	Sensor Name	Source
Satellite Images	04/02/2007	Landsat 7	USGS
	08/01/2015	Landsat 8	USGS
	26/08/2023	Landsat 8	USGS

Land cover maps were generated for the years 2007, 2015, and 2023 using a supervised classification technique. Areas covered with cloud cover are also classified while creating those maps. To identify the temporal changes in the land cover from 2005 to 2015, 2015 to 2023, and 2007 to 2023, a systematic change detection analysis was done by using the raster calculator tool found within the Spatial Analyst Tools in ArcGIS software. Area calculations were performed to determine the extent of change in square kilometers. Then, maps showing landslide occurrence locations within the study period were

developed. These maps were overlaid to the above maps to find the relationship between those variables.

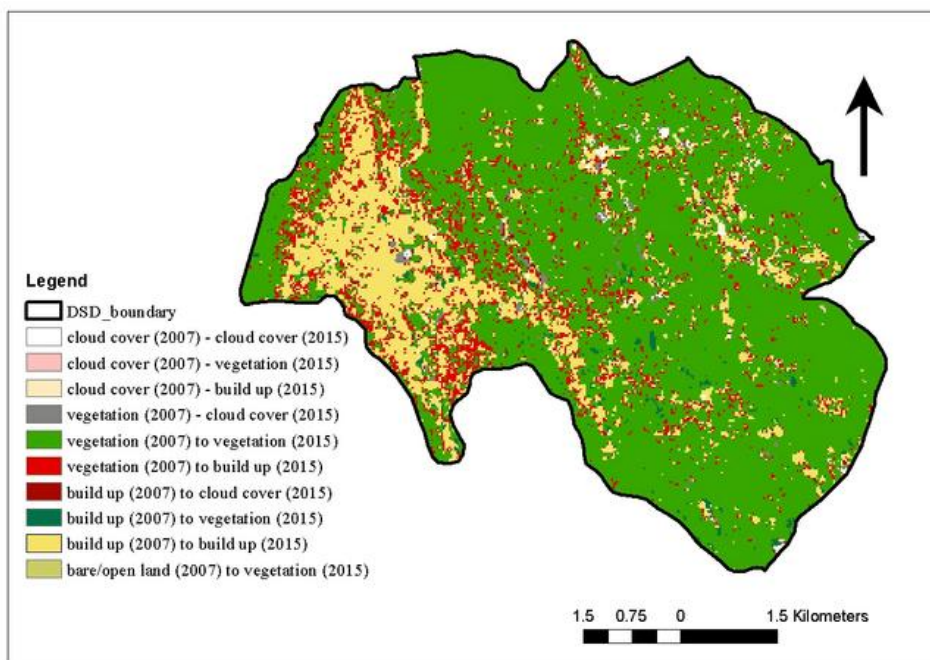
Results and Discussion

Figures 1, 2, and 3 show significant growth in built-up areas, with an area expansion of 7.1 km² between 2007 and 2015, and 2.78 km² from 2015 to 2023, resulting in an approximate total increase of 10 km² over these 17-year periods.

Area covered by vegetation cover has shown a corresponding decline, with a decrease of 6.83 km² from 2007 to 2015 and 5.17 km² from 2015 to 2023. Therefore, approximately 12 km² of vegetation cover was lost. There has been a noticeable shift of 11.6 km² areas from vegetation to built-up areas between 2007-2023.

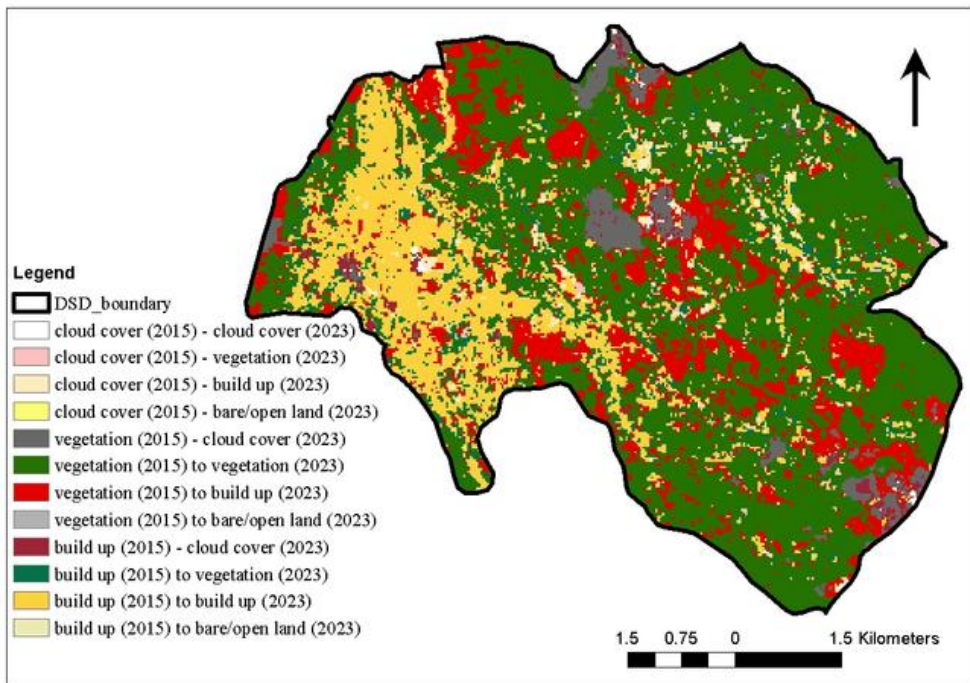
Figure 1:

Land Cover Changing Map (2007-2015)



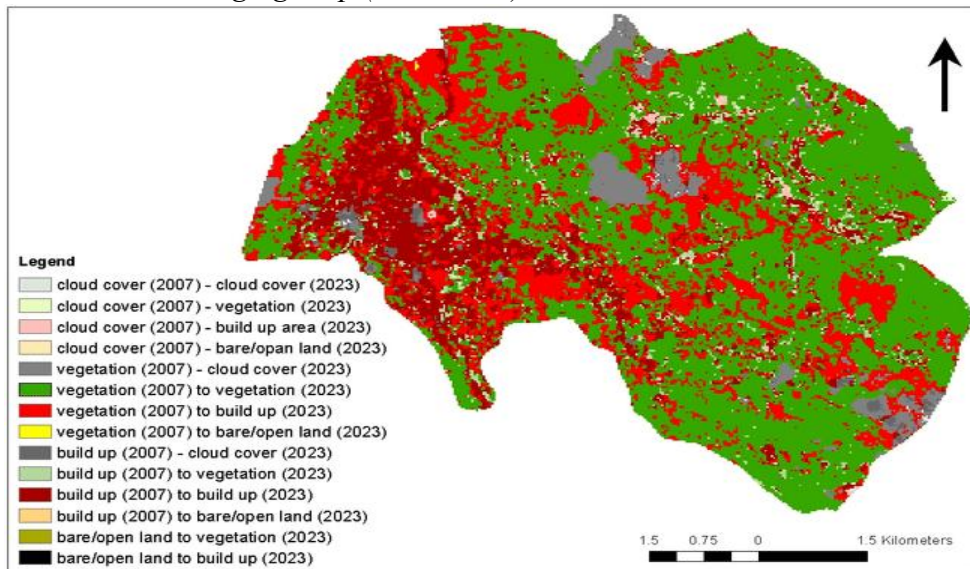
Source: Map Prepared by the Author using ArcGIS 10.8

Figure 2:
Land Cover Changing Map (2015-2023)



Source: Map Prepared by the Author using ArcGIS 10.8

Figure 3:
Land Cover Changing Map (2007-2023)



Source: Map Prepared by the Author using ArcGIS 10.8

The below table (Table 2) displays the number of landslides in the study area of the considered period, revealing there is a fluctuation in the frequency of landslides over this period. Spatial distribution of those landslides is shown in Figure 4.

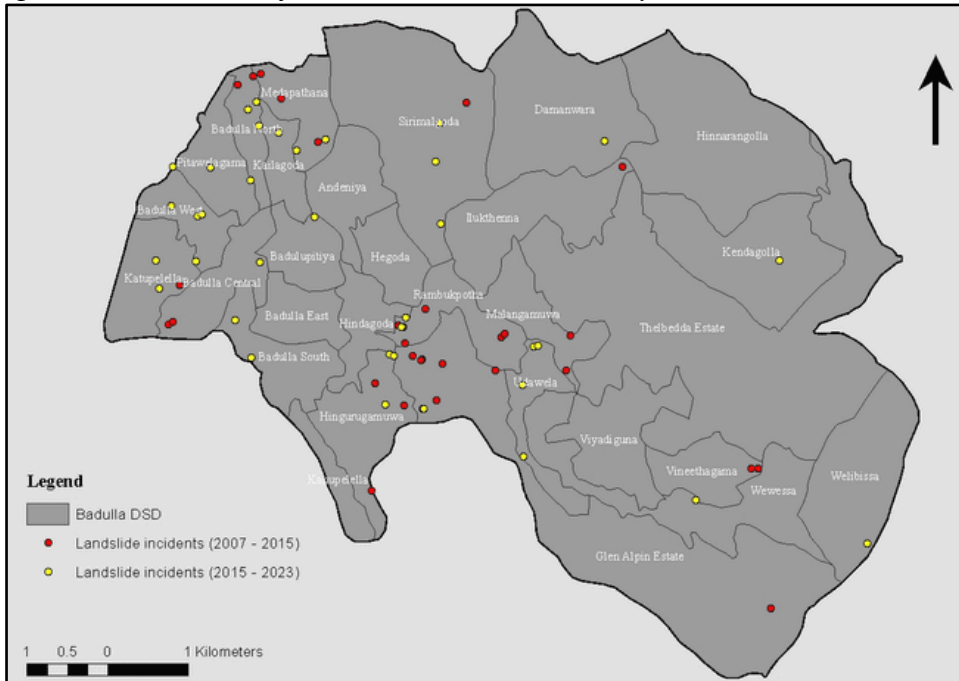
Table 2:

Number of Landslide Events in Each Respective Year

Year	Number of landslide events
2009	3
2010	4
2011	7
2012	2
2013	2
2014	8
2015	7
2016	1
2017	8
2018	3
2019	9
2020	3
2021	1
2022	5
2023	7

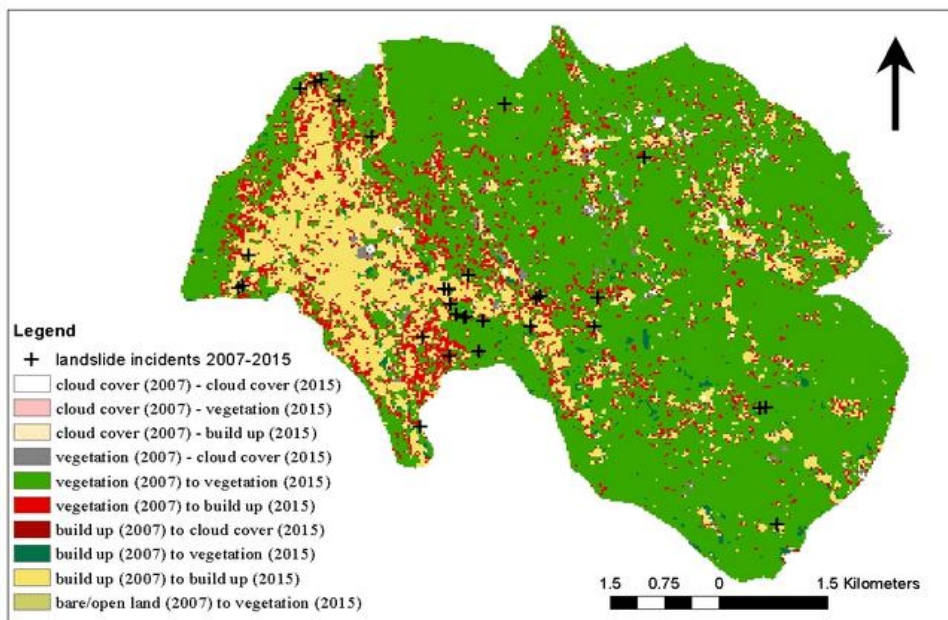
Source: National Building Research Organisation, Sri Lanka

Figure 4:
Spatial Distribution of Landslides across the Study Area



Source: Map Prepared by the Author using NBRO Data

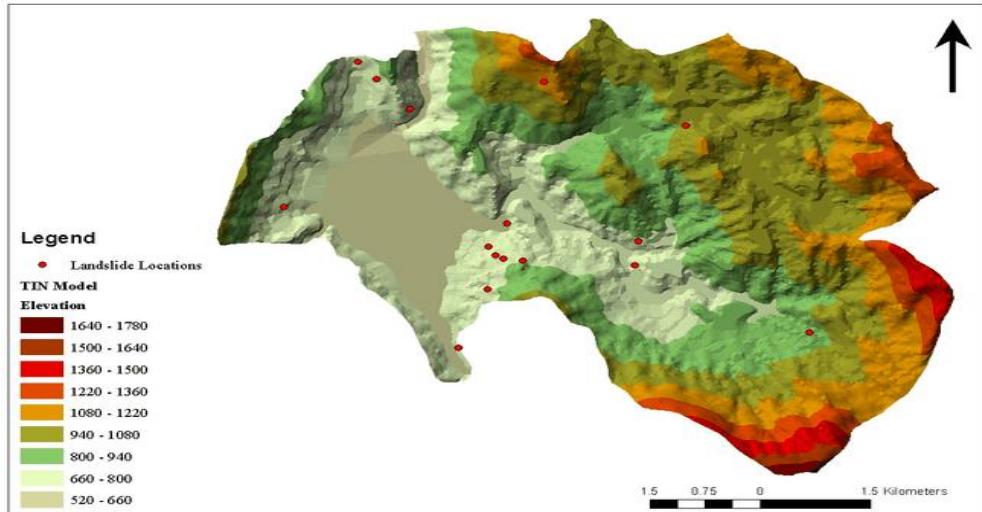
Figure 5:
Landslide Locations with Changing Land Cover Types (2007-2015)



Source: Map Prepared by the Author using ArcGIS 10.8

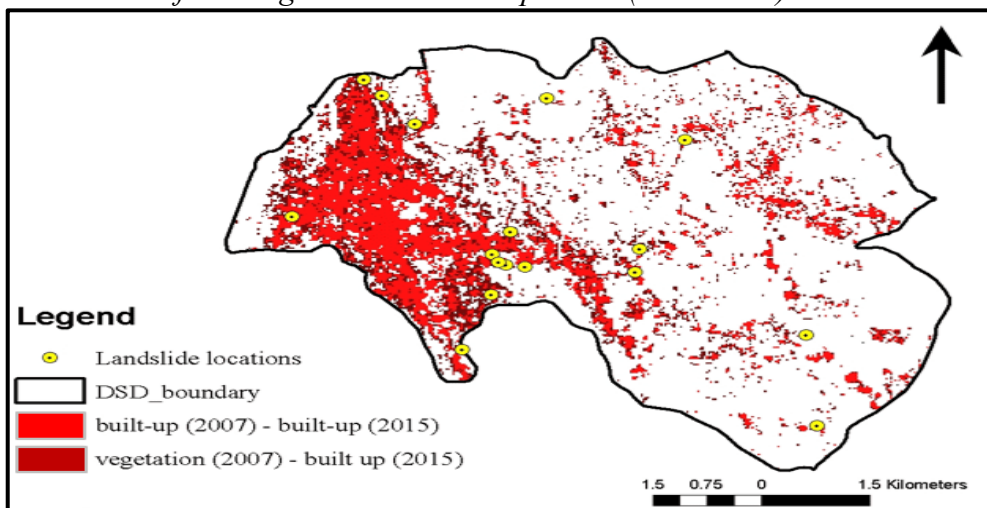
From 2007 to 2015, 18 landslide events occurred in areas with maintained vegetation cover (Figure 5). However, approximately 4 landslides experienced slight changes in vegetation. Figure 6 reveals that the remaining landslides did not occur in the areas that have steep slopes. They were concentrated near the areas that had consistent built-up land from 2007 to 2015 or areas that transitioned from vegetation to built-up areas (figure 7).

Figure 6:
Landslide Locations with TIN Model



Source: Map Prepared by the Author using ArcGIS 10.8

Figure 7:
Landslide Locations with Areas had Consistent Built-Up Land and Areas that Transitioned from Vegetation to Built-Up Areas (2007-2015)

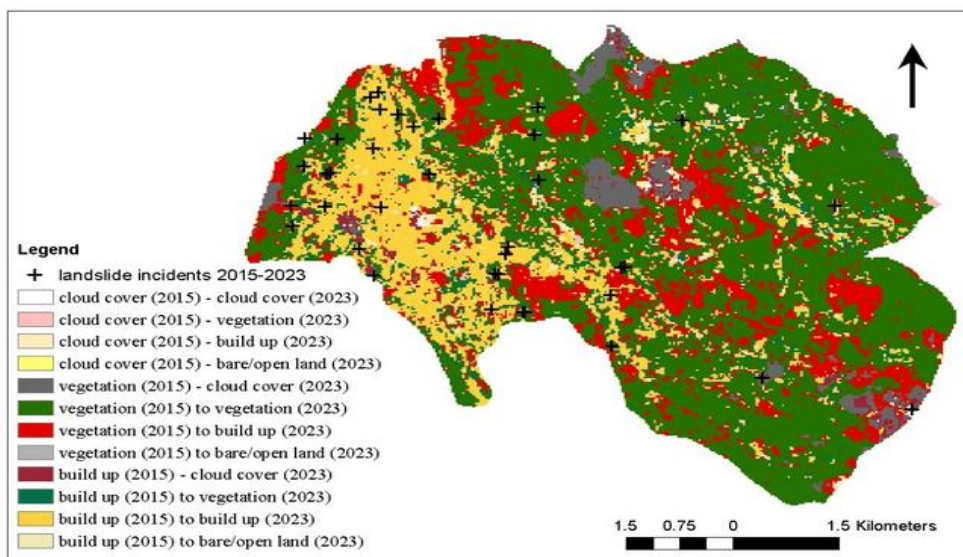


Source: Map Prepared by the Author using ArcGIS 10.8

This result suggests the vegetation zones near the areas that have continuously built up and transitioned from vegetated to build-up are particularly vulnerable. Areas that convert from vegetation to built-up experienced 6 landslide events. It indicates that urban development can disrupt the natural land cover and it could potentially increase the landslide vulnerability. Figure 8 shows the highest number of landslides (23 occurrences) occurred in areas that remained as built-up areas or experienced further urban development areas. It reveals that regions that were consistently used for urban purposes or continually developed are more vulnerable to landslides.

Figure 8:

Landslide Locations with Changing Land Cover Types (2015-2023)



Source: Map Prepared by the Author using ArcGIS 10.8

Despite the mountainous nature of the study area, the spatial distribution of the landslides reveals that most landslides have occurred in relatively flat areas, which remained built-up or experienced further urban development from 2015 to 2023. These areas are relatively less steep than the surrounding slopes yet these areas are more vulnerable to landslides because of the effects of urban activities.

Conclusion and Recommendations

The results of this study indicate a strong relationship between changes in land cover and the frequency of landslides in the Badulla DSD. There is a significant change in land cover during the study period, with a clear decrease in vegetation areas and an increase in urbanised areas. A significant number of landslides occurred near the regions that either remained consistently built-

up or had transitioned from vegetation to built-up areas. The proximity to the urbanised zones likely increases their vulnerability to landslides. There has been an increase in landslide incidents in urban areas over time. The following are some recommendations that can be taken to reduce the further vulnerability to landslides. One recommendation is to create vegetative buffer zones in vegetation areas near the urbanised areas. The reason is that vegetation areas near the regions that either remained consistently built-up or had transitioned from vegetation to built-up experienced landslides. This proximity between those areas increases the landslide vulnerability. Strict zoning regulations to control the expansion of built-up areas near the slopes and vegetated areas and improve the drainage system are the next recommendations to reduce the landslide risk. These ditches should be created to intercept and divert water away from vulnerable areas.

References

Sivagurunathan, L. (2022). Spatial and temporal variation of landslides in Badulla. *ResearchGate*. <https://www.researchgate.net/publication/366545130>

SPATIAL AND TEMPORAL ANALYSIS OF POVERTY IN GAMPAHA DISTRICT

Isuru Udakara Yakandawala^{1*}

¹ *University of Kelaniya*

Abstract

Space and Time are significant factors that can change the structure of poverty. Poverty is also a critical factor that can change the development in future. Therefore, this study focused on the Gampaha District and its temporal and spatial changes in poverty in relation to development within the district. Identifying the temporal and spatial poverty in the study area, mapping, and analysing maps are the main objectives of this study. Based on GIS techniques such as the Graduate Colour option with Colour Ramp, Bar Chart, Unique Values, and Field Calculation tools have been used for the mapping results in ArcGIS. This study has taken the census data from the Department of Census and Statistics, Sri Lanka. In conclusion, this study has shown the disparity in poverty alleviation programmes and poverty patterns in the Gampaha District.

Keywords: *ArcGIS, GIS, Poverty, Spatial Distribution, Spatial Techniques*

*Corresponding author: Tel.: +94 (76) 717 0523; Email: 22isuru22@gmail.com;
<https://orcid.org/0009-0000-6743-9657>

Introduction

This study aimed to identify the spatial and temporal patterns of poverty over ten years. The United Nations defines poverty as “a denial of choices and opportunities, a violation of human dignity” (United Nations, 1995). Poverty study is important for a variety of reasons. Temporal poverty analysis is essential for capturing the dynamic nature of poverty and assessing changes in poverty levels and trends over time. It provides insights into the transitions in and out of poverty, the duration of poverty spells, and the factors influencing poverty dynamics (Dang, Lanjouw, & Luoto, 2019). By examining the temporal dimension of poverty, policymakers and researchers can identify vulnerable groups that are persistently trapped in poverty or at risk of falling into poverty due to specific life events, economic shocks, or policy changes (Ravallion, 2016). Thus, understanding poverty is critical for developing successful poverty-relief policies and actions. Poverty study sheds light on the special demands and challenges that less privileged individuals and communities experience. It aids in identifying vulnerable populations and understanding their specific conditions. This knowledge enables governments and organisations to build more effective, tailored initiatives and programmes that address specific needs and relieve poverty. Research on poverty is critical in determining the efficacy of poverty-reduction programmes and policies. In Sri Lanka, GIS-based poverty analysis has emerged as a valuable approach to understanding and addressing poverty-related issues. Geographic Information Systems (GIS) technology enables the integration and analysis of spatial data, such as poverty indicators, demographic data, infrastructure data, and geographic features providing insights into the spatial patterns and dynamics of poverty. Therefore, poverty in Gampaha should be analysed through temporal and spatial perspectives using GIS techniques, which is a crucial aspect of this research for informing policy and poverty alleviation efforts. Furthermore, the study mainly relies on several objectives related to poverty in the Gampaha District and Sri Lanka.

1. Identifying the spatial and temporal changes in poverty in the Gampaha District.
2. Visualising poverty by a set of clear poverty maps in the study area.
3. Investigating the key takeaways that can be taken from spatial and temporal change.

Material and Methods

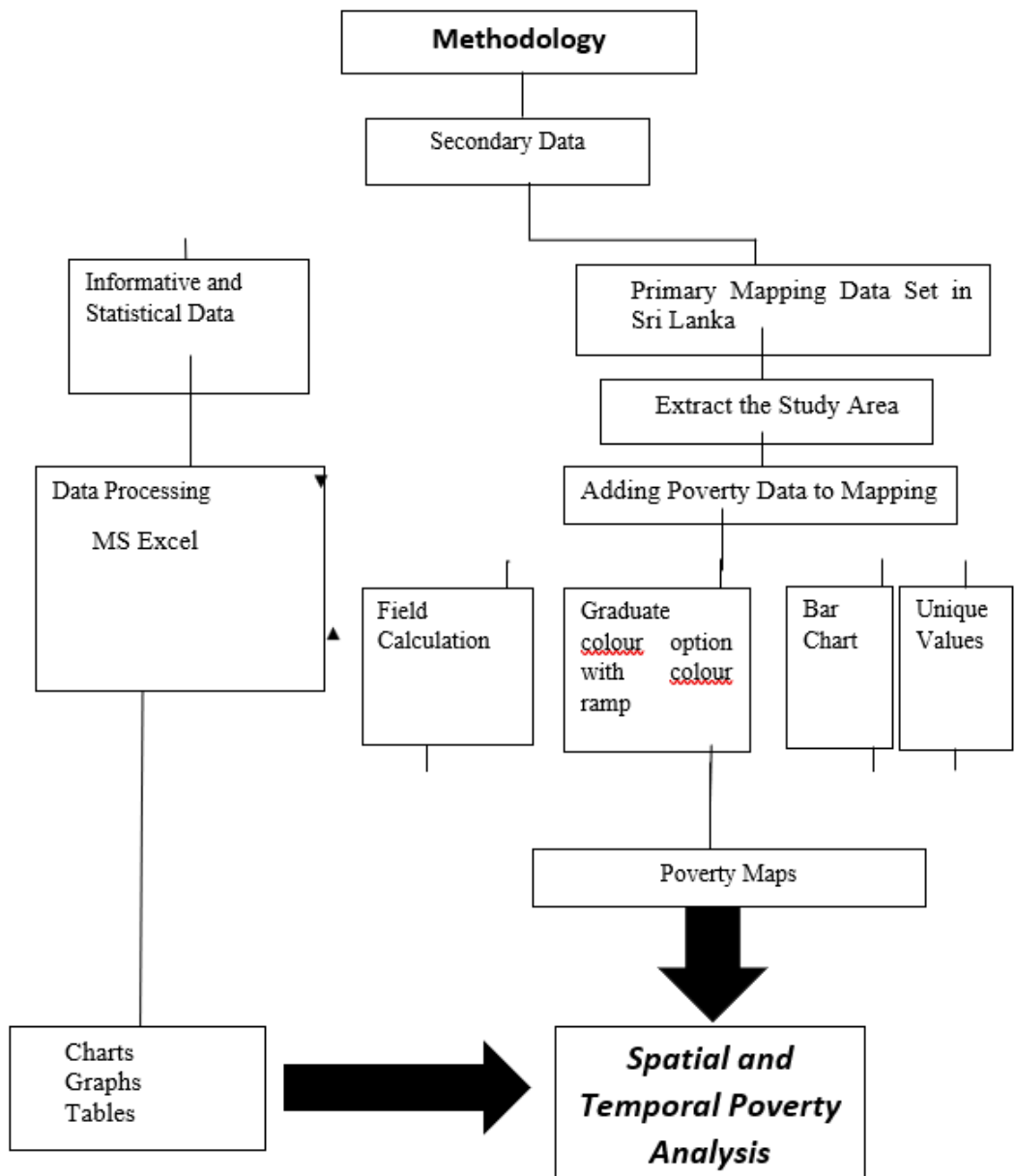
Poverty data is necessary for the mapping process and the analysis phase of the study. Those data were obtained from the Department of Census and Statistics in Sri Lanka. Map and location data were gathered from the Urban Development Authority GIS Division and the United Nations Office for the Coordination of Humanitarian Affairs. Subnational Administrative Boundaries for Sri Lanka were taken from the Humanitarian Data Exchange, powered by the United Nations Office for the Coordination of Humanitarian Affairs. Other data used in this study were obtained from recognised data sources. All the data used in the study were temporally updated from the available data sources for literature review and other conceptual analysis.

Two types of poverty data, stored and organised, were integrated into ArcGIS software. In ArcGIS, the data were joined to the attribute table of the study area map. Then data were used for the mapping process. Mainly, two maps were created for the same year: one for the poverty population and the other for the poverty headcount ratio (poverty population or households DSDs). All 13 DSDs in Gampaha were presented in one map to visualise the spatial disparities of poverty. Another map was created for the comparative analysis by combining poverty maps of the two years. ArcGIS Software was used as the main visualising and mapping tool. All maps were created by ArcGIS with available shapefiles and datasets. Data in the attribute of the layer of the study map shapefile were symbolised using the ‘Symbology’ technique in ArcGIS. Two types of poverty data were visualised separately, as given below.

- I. Graduate Colour option with Colour Ramp
- II. Bar Chart
- III. Unique Values
- IV. Field Calculation

The figure demonstrates the overall process of the study methodology with techniques that have been employed. (Figure 1)

Figure 1:
Methodology Chart



Source: Conceptualised by Author

Results and Discussion

According to poverty mapping, there are critical changes of poverty ranges through the decade. The Poverty Map of Gampaha District (DSD vise %) – 2002 / 2012 (Figure 2/3) demonstrates the headcount in each district. The head count in the lower range has shrunk. The lower range of poverty has diminished by 1%. The lower poverty range has decreased from 4% to 3%. Therefore, after ten years of time, the overall lower level of poverty in Gampaha has reduced by at least 3% of every DSD (Figure 4). The higher level of poverty has also decreased over the decade. Higher level has been reduced from 12% to 11%. However, in 2012, two DSDs remained in high poverty, accounting for one-fifth of the poverty in the region. Considering all this evidence, overall poverty was in the process of poverty reduction. Nevertheless, poverty reduction at some DSD levels was significantly low. There are major issues that can be conceptualised by descriptive comparative map analysis of the spatial and temporal distribution of poverty across all DSDs.

1. Unfair poverty alleviation programmes
2. Rural areas show slow progress in poverty reduction
3. Lack of regional planning
4. Lack of national participation

Figure 2:

Poverty Map of Gampaha District (DSD vise %) – 2002

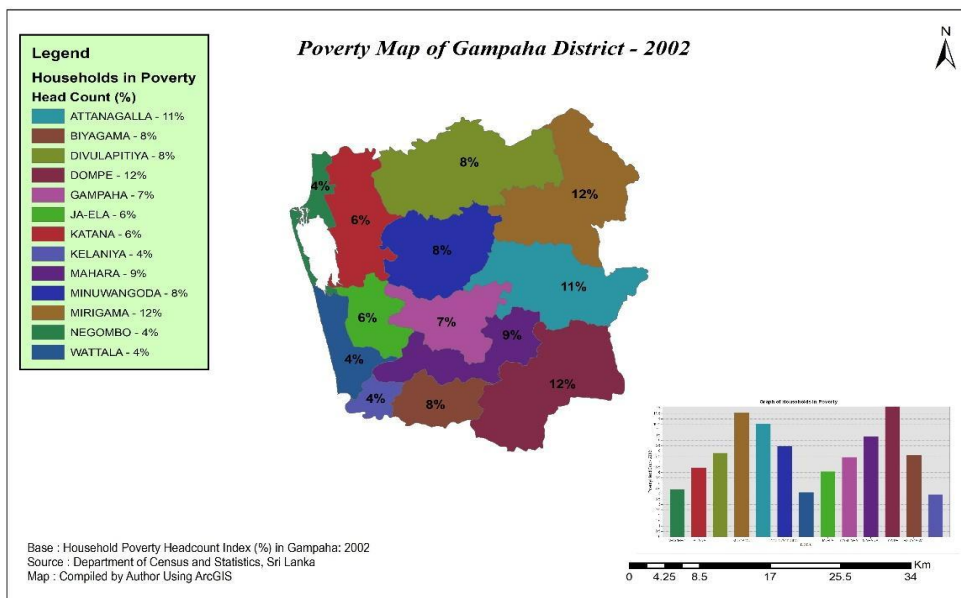


Figure 3:
Poverty Map of Gampaha District (DSD vise %) – 2012

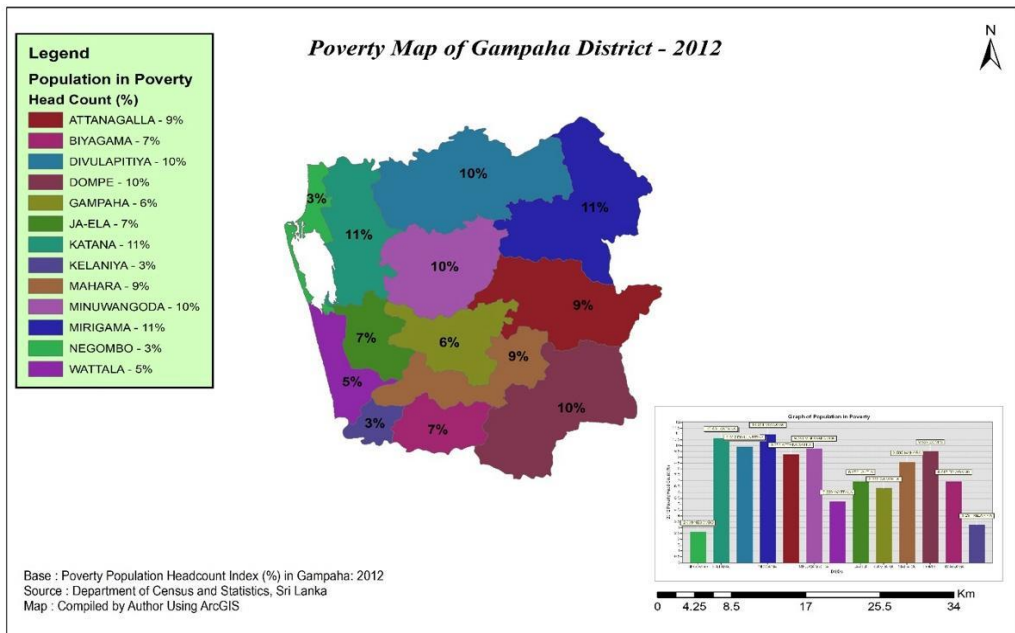
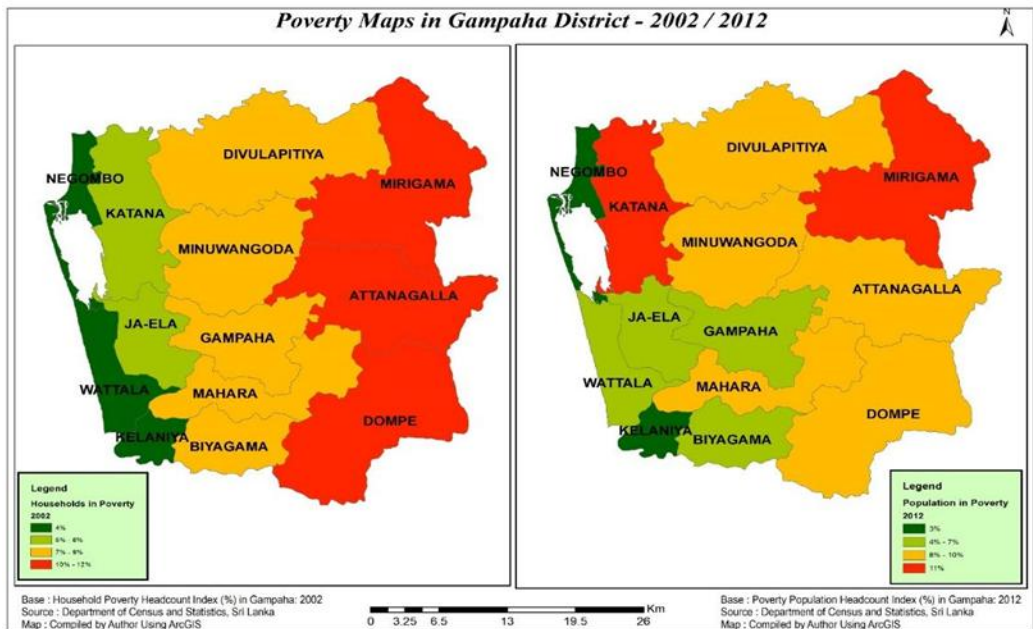


Figure 4:
Poverty Map of Gampaha District - 2002 / 2012



Conclusion and Recommendations

Gampaha is the second largest populous and urbanised country. The poverty in the Gampaha District and DSD wise poverty are in the process of poverty reduction. However, in many cases, unfair poverty reduction and unequal poverty alleviation effectiveness can be seen. Some DSDs' poverty alleviation process effectiveness remains very slow. Rural and urban inequality can be seen in the poverty reduction process. Therefore, national plans can be developed at the government level. On the other hand, regional and rural development, and poverty alleviation empowerment programmes should be structured. This multi-dimensional process of poverty and development has the potential for development and consequently, poverty reduction in Gampaha.

According to poverty mapping, there are critical changes in poverty ranges through the decade. The headcount lower range has shrunk. The lower range of poverty has diminished by 1%. Therefore, after ten years, the overall lower level of poverty in Gampaha has reduced by at least 3% of every DSD. The higher level of poverty also has been shrinking within 10 years. The higher level has reduced from 12% to 11%. When considering all this evidence, overall, there was a reduction in poverty. However, in some DSD levels, poverty reduction has been highly low. Therefore, to accelerate the poverty eradication and poverty disparities in the district, a fair regional and national level fully structured and well-planned poverty alleviation programme is required.

References

Dang, H. A., Lanjouw, P., & Luoto, J. (2019). Analysing the dynamics of poverty: The role of intermediate transitions. *Journal of Economic Inequality*, 17(2), 183–200.

United Nations. (1995). *The Copenhagen Declaration and Programme of Action*. Retrieved from <https://www.un.org/en/development/desa/dspd/human-rights/standards-and-monitoring/mdg-to-sdgs/copenhagen-declaration-on-social-development.html>

United Nations. (n.d.). Addressing poverty. *United Nations*. <https://www.un.org/en/academic-impact/addressing-poverty#:~:text=Nearly%20half%20of%20the%20world's,than%20US%20%241.25%20a%20day>

INTRODUCING STRATEGIES FOR DEVELOPING EXPORT AGRICULTURAL CROPS OF PEPPER, CINNAMON AND COFFEE IN MĀVATAGAMA DIVISIONAL SECRETARIAT DIVISION IN KURUNĀGALA DISTRICT, SRI LANKA

A.H.M.A. Kaushalya^{1*}, R.J.M. Uduporuwa²

^{1,2} *Department of Geography and Environmental Management, Sabaragamuwa University of Sri Lanka*

Abstract

Exporting agricultural crops grown in Sri Lanka has been in international demand since ancient times. The objectives of this study are to map the existing spatial distribution pattern of minor export crops of pepper, cinnamon, and coffee, to recognise challenges faced by the growers, and to identify sustainable strategies for promoting selected export agricultural crops in the Mawathagama Divisional Secretariat Division (DSD) in Kurunegala District, Sri Lanka. Watareka, Katugampalagedara, Dunukewatta, Uggalpaya, and Uda Iguruwatta Grama Niladari Divisions (GND) were the sample GNDs. One hundred farmers who have one to five acres of cultivated land extents were selected using the quota sampling method to map the spatial distribution pattern of the aforementioned crops and for the questionnaire survey. Problem tree and solution tree tools in Participatory Rural Appraisal (PRA), SWOT analysis, interviews and discussions with officials of relevant departments, and field observations were also performed to achieve other objectives. Results showed that the most-grown export agricultural crop by farmers from the sample is pepper (45%) in the study area, while cinnamon is the second-highest crop (47%), and coffee is the third-highest (14%). Lack of knowledge (50%), lack of access to improved varieties of farmers (20%), climate and environmental issues (11%), pests and diseases (9%), and price fluctuation (10%) are the major challenges faced by the farmers. It is essential to provide them with proper technical training and guidance, agricultural education, sustainable farming practices and to streamline financial affairs to promote the minor export crops in Mawathagama DSD.

Keywords: *Cinnamon, Coffee, Mawathagama DSD, Pepper, Sustainable Strategies*

*Corresponding author: Tel.: +94 (77) 4945720; Email: anupama.kaushalya89@gmail.com;

Introduction

Sri Lanka is a leading global exporter of spices and produces some of the best spices available. Sri Lanka earned USD 312.5 million in export revenue from the sale of spices in 2019 (Dissanayaka, 2021). Among them, pepper, cinnamon, and coffee plantations are the main sectors. These are grown mostly in the central part of the island in fertile and diverse soil types and varying temperature conditions. Currently, there is a declining trend in traditional export crops such as tea, rubber, and coconut in Sri Lanka due to several factors, and now the government has identified the importance of promoting minor export crops (Gunaseena, 2024). The cultivation of minor export crops presents a potential strategy to alleviate persistent rural unemployment and underemployment issues (Bulankulama & Nuwan, 2021).

This study focuses specifically on the identification of sustainable strategies that can enhance the production capacity of pepper, cinnamon, and coffee plantations in Mawathagama DSD in Kurunegala District, Sri Lanka. For this study, Watareka, Katugampalagedara, Dunukewatta, Uggalpaya, and Uda Iguruwatta GND of Mawathagama DSD were selected. These selected GNDs are located on the border of Kandy District and Kegalle District, where minor export crops are predominantly grown in the country. Other objectives of this study are to map the existing spatial distribution pattern of minor export crops of pepper, cinnamon, and coffee, and to recognise challenges faced by the cultivators in the Mawathagama DSD.

Material and Methods

One hundred farmers with 1 to 5 acres of cultivated land extents were selected using the quota sampling method to map the spatial distribution pattern of minor crops and to conduct the questionnaire survey. Problem tree and solution tree tools in Participatory Rural Appraisal (PRA), SWOT analysis, interviews, and discussions with officials of relevant departments, as well as field observations, were performed to identify challenges faced by the farmers and to gather ideas to promote the minor export crops within the DSD. The mapping exercise was performed with GIS 10.8 software and percentage distribution analysis and qualitative analysis were conducted to achieve other objectives.

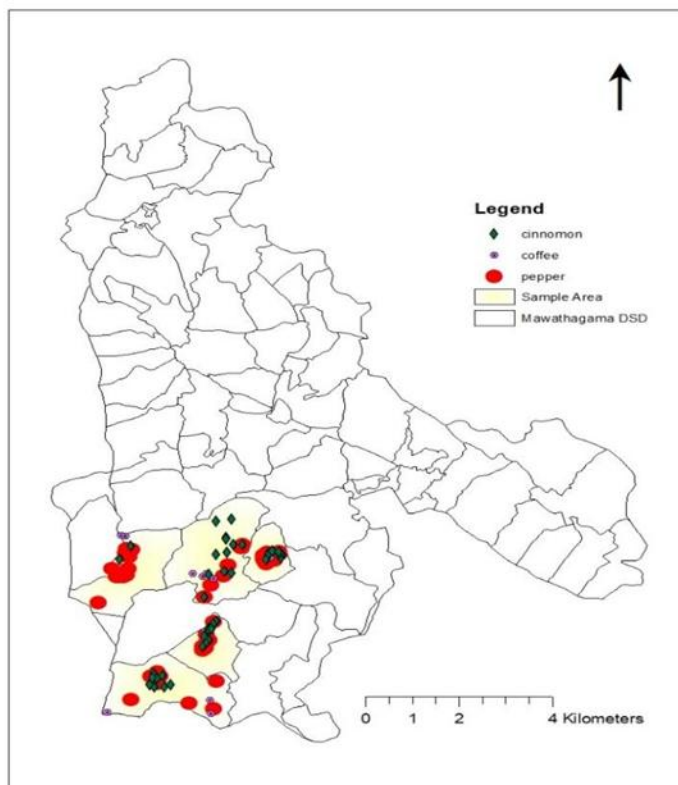
Results and Discussion

Out of a sample of 100 farmers selected from Mawathagama DSD, 47% of farmers grow pepper, 45% grow cinnamon, and 14% cultivate coffee, indicating that pepper and cinnamon are the most commonly grown minor

crops, while coffee is less prevalent. The highest concentration of pepper lands is found in the Katugampalagedara GND while the highest extent of cinnamon lands is found in Wataraka and Uda Iguruwatta GNDs. Wataraka and Uggalpaya GNDs can be found in most coffee-grown areas.

Figure 1:

Spatial Distribution Pattern of Pepper, Cinnamon, and Coffee in Selected GNDs in Mawathagama DSD, 2024



Source: Based on GPS locations of selected 100 samples in the study area, 2024

A questionnaire survey revealed that 50% of farmers lack proper knowledge regarding the cultivation and harvesting process of three crops. Most of the elderly people over the age of 55 in the area are involved in cultivation, and they have minimal knowledge about growing crops sustainably and strategically. The government implements programmes to introduce sustainable practices incorporating technical knowledge and methods, but only a limited number of growers participate in the programmes. Although farmers are provided with equipment under subsidized payment schemes through the Minor Export Crops Department to harvest and dry pepper, a large amount of the crop is wasted due to the lack of technical knowledge. The inability to dry pepper during the rainy season is a major

challenge. Farmers follow traditional drying methods that damage the quality of the crop. Access to improved varieties of cinnamon, pepper, and coffee is also limited (20%). Climatic and environmental issues (11%) also impact the crops. Mawathagama DSD is an area with a tropical monsoon climate, and during the dry and rainy seasons, crops are stressed and yield decreases. The spread of pests and diseases (9%) was also identified as a challenge. *Diconocoris distant* Drake, *Pterolophia annualata*, and Root mealybugs damage the pepper cultivation. Fluctuations in global market prices (10%), and competition from other producers in domestic and international markets were identified as other challenges faced by the farmers.

Furthermore, the lack of labor, low income of farmers, low yield, low quality of the harvest, loss of interest among farmers, high vulnerability to climate change, forest destruction, and soil erosion also were identified as challenges through the problem tree investigation.

Carrying out awareness programmes more formally among the people about how to develop pepper, cinnamon, and coffee plantations using sustainable strategies, providing financial assistance, supporting farmers who follow organic farming methods, and guiding farmers to use technical equipment while making them aware of the advantages of using technology for farming—such as improving efficiency, saving labor resources, increasing yield, and reducing post-harvest damage are necessary actions. Creating awareness about efficient irrigation systems and providing subsidies and credit facilities for the development of irrigation systems, creating awareness about soil conservation techniques and adverse effects of soil degradation, educating the people about the international value and demand for Sri Lankan minor export crops, and providing a fair price for their harvest, developing of post-harvest techniques and storage facilities are necessary actions to promote these crops. Instead of sending the harvest directly to the market, the farmers should be directed to produce various products using their harvest. To increase the production capacity of coffee showing a minimum production cost, training on the diversification of coffee production and increasing trade value may be preferable. Providing the necessary machines for drying the harvest under the easy payment system and under credit facilities and subsidies, lands at affordable prices, seedlings and fertilizers also are possible strategies.

Conclusion and Recommendations

Pepper, cinnamon, and coffee cultivators in Mawathagama DSD are challenged by several issues which negatively impact their harvest, their economy and ultimately the standard of living. Therefore, to empower this

production process with strong sustainable strategies and continuous practices is essential. This study highly recommends educating farmers regarding export agricultural crop cultivation sustainably, providing technical and financial assistance, ensuring local and foreign market opportunities, government involvement to manage pests and diseases, and research and development as major areas of sustainable strategies.

References

Bandara, H., Bulankulama, S., & Nuwan, A. N. (2021). Cultivation of minor export crops as a strategy for expansion of employment opportunities in the rural sector (Evidence from Galagedara GN Division). *Proceedings of 2nd National Symposium on Sustainable Plantation Management 2020*, National Institute of Plantation Management - Ministry of Plantation.

Gunasena, W. (2024). Exploring the hidden gems: Minor export crops in Sri Lanka. *Global Crises and International Relations*, 9, 59–69. Britain Book Company.

Thibbotuwana, N. D. A. M. (2021). Sri Lanka's agri-food trade.

THE IMPACT OF URBAN LAND COVER CHANGES ON LAND SURFACE TEMPERATURE IN COLOMBO MUNICIPAL COUNCIL AREA BASED ON GEOSPATIAL DATA

L.P.T.S. Dayarathna^{1*}, R.J.M. Uduporuwa²

^{1, 2} Department of Geography and Environmental Management,
Sabaragamuwa University of Sri Lanka

Abstract

Rising temperatures have become a critical global issue, driven by rapid land cover changes. This study investigates the impact of urban land cover changes on Land Surface Temperature (LST) in the Colombo Municipal Council (CMC) area based on geospatial data. Urban land cover changes (2000–2023) are represented by the variables of built-up area (NDBI), vegetation cover (NDVI), watery area (NDWI), and bare lands (NDBaI). LST and variables of land cover were extracted from Landsat 05 and 08 satellite images (ArcGIS Pro 3.30). Simple linear regression correlation analysis was performed using MS Excel 2019 and GraphPad to examine whether LST variations are impacted by the selected variables of urban land cover. Results show that the mean LST has increased from 24.02°C in 2000, 26.95°C in 2012, and further to 28.84°C in 2023, indicating a rise of 4.82°C over 23 years. During this period, the mean values of variables of urban land cover also changed. NDBI has increased by 0.12, NDVI has decreased by 0.14, NDWI has decreased by 0.18, and NDBaI was noted to decrease by 0.12. Correlation analysis in 2000, 2012, and 2023 revealed a moderate positive correlation between LST and two variables of urban land cover (NDBI; $R = 0.46$, $R = 0.61$, $R = 0.59$, and NDBaI; $R = 0.56$, $R = 0.54$, $R = 0.63$), while there were low negative correlations between the other two variables of LST and NDVI ($R = -0.33$, $R = -0.44$, $R = -0.34$) and NDWI ($R = -0.13$, $R = -0.11$, $R = -0.22$). The study concludes that LST increases are significantly affected by the NDBI and NDBaI variables of urban land cover. These findings are significant for implementing sustainable urban planning strategies.

Keywords: *LST, CMC, Horizontal, Urban Structure, Regression Analysis*

*Corresponding author: Tel.: +94 (77) 350 0709; Email: sahandayarathna2@gmail.com
<https://orcid.org/0009-0003-1147-2476>

Introduction

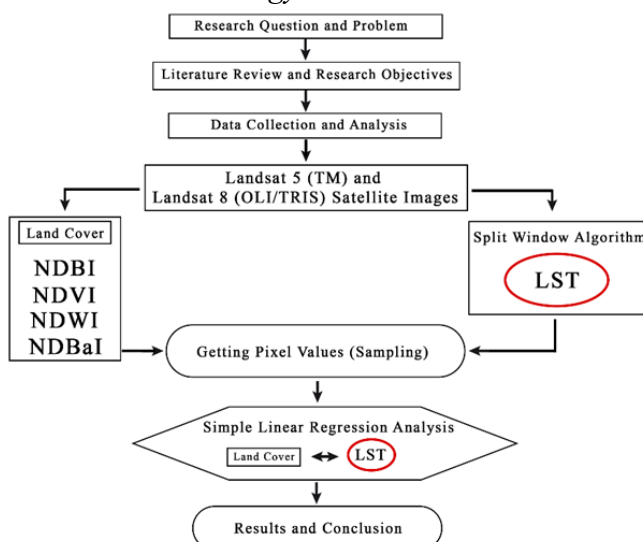
The impact of urban land cover changes on LST is a critical issue in urban climate studies. Colombo City, Sri Lanka's commercial capital, has experienced rapid urban growth, leading to significant changes in its land cover and LST. Using Landsat data from 2000 to 2023, this study investigates how urban land cover changes have influenced LST in the CMC area. The research aims to analyse two decades of land cover changes and examine their correlations with LST. Previous studies have indicated that impervious surfaces, such as buildings and roads, absorb and retain more heat, contributing to LST (Jayasinghe et al., 2017; Rajapaksha et al., 2021). Understanding these dynamics is essential for sustainable urban planning and mitigating heat-related risks in CMC. This research fills a significant gap by exploring the temporal and spatial correlations between LST and urban land cover, thereby enhancing understanding and informing the development of effective action plans.

Material and Methods

The CMC is situated in the Western Province along the west coast of Sri Lanka (Mapalagama et al., 2016). The CMC is located approximately at latitude 6°56'04" N and longitude 79° 50' 34" E (Gunasekara, 2015). The administrative boundaries of the CMC cover an area of 37 km².

Figure 1:

Research Methodology



This research primarily relies on secondary data sources. The methodological framework is illustrated in Figure 1. Satellite imagery utilised in this study comprises Landsat 5 Thematic Mapper (TM) and Landsat 8 Operational Land Imager (OLI)/Thermal Infrared Sensor (TIRS) images, which were obtained from the United States Geological Survey (USGS) database.

Table 1:

Landsat 05 TM and 08 OLI/TIRS Satellite Images

Year	Sensor	Path	Row	Cloud	Time	Pixel Resolution
2000	Landsat 5	141	055	8.0%	Day	30m
2012				11.36%		
2023	Landsat 8	141	055	6.69%	Day	30m

Source: USGS Data

The LST was derived using split-window algorithms, as detailed in Table 2. Urban land cover indices, including the Normalised Difference Building Index (NDBI), Normalised Difference Vegetation Index (NDVI), Normalised Difference Water Index (NDWI), and Normalised Difference Bareness Index (NDBaI), were calculated using ArcGIS Pro 3.30 software.

Table 2:

Formulas of Split Window Algorithm to Extract LST (Landsat 5/8)

Parameter	Landsat 5/8 Bands	Formula
Spectral Radiance (L_λ)	6 / 10	$L_\lambda = \frac{(L_{max} - L_{min})}{Q_{max} - Q_{min} + L_{min}} \times (Q_{cal} - Q_{min})$
Brightness Temperature (BT)	6 / 10	$BT = \frac{K_2}{\ln(\frac{K_2}{L_\lambda} + 1)} - 273.15$
Land Surface Emissivity (LSE)	Calculated from NDVI	$\epsilon = 0.004 \times NDVI + 0.986$
Land Surface Temperature (LST)		$LST = \frac{BT}{1 + (\frac{\lambda \cdot BT}{\rho}) \ln \epsilon}$

Source: Uduporuwa & Manawadu, 2019

The formulae employed for calculating NDBI, NDVI, NDWI, and NDBaI are presented in Table 3.

Table 3:*Urban Land Cover Indices (Landsat 5 and 8)*

Index	Formula (Landsat 5/8)
NDBI	$NDBI = \frac{(SWIR - NIR)}{(SWIR + NIR)}$
NDVI	$NDVI = \frac{(SNIR - R)}{(NIR + R)}$
NDWI	$NDWI = \frac{(G - NIR)}{(G + NIR)}$
NDBaI	$NDBaI = \frac{(SWIR - TIRS)}{(SWIR + TIRS)}$

Source: USGS Data

Simple regression analysis was conducted to examine the relationship between temporal LST variations and the temporal variations of selected urban land cover variables. This analysis was performed using Microsoft Excel 2019 and GraphPad software. The simple linear regression correlation analysis employed the following formula.

$$y = a + bx + e$$

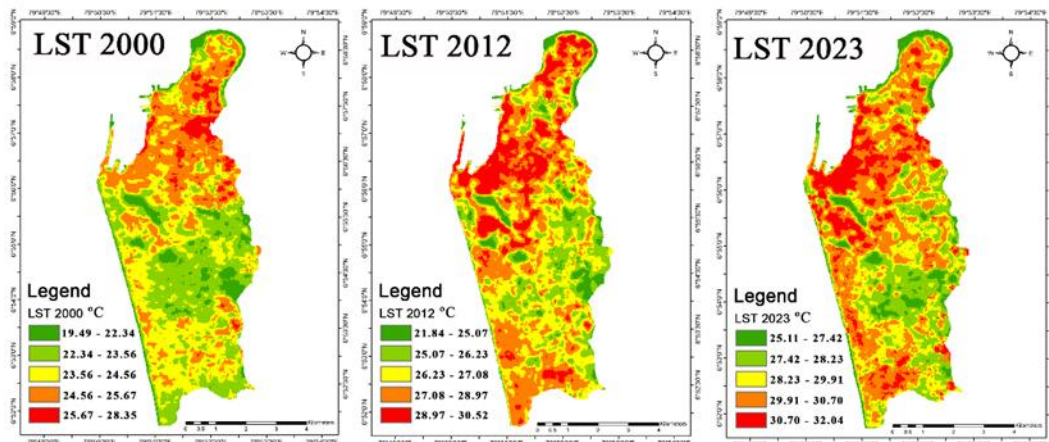
Where; y = Dependent variable x = Independent variable e = an “error” term
a, b = constants Constant a and b represent the intercept and slope, respectively of the regression line.

Results and Discussion

Spatial and Temporal Variations in Land Surface Temperature

The analysis of spatial changes in LST revealed distinct patterns across the study period. In the year 2000, elevated LST were predominantly observed in the northern part of the study area, while the southern region exhibited lower LST. This pattern underwent significant changes by 2012 and 2023. The later years demonstrated a more extensive temperature range in the southern part, extending along the northern section and the west coast. Conversely, the eastern area consistently displayed a distribution of lower LST throughout the study period (Figure 2).

Figure 2:
Spatio-Temporal Change in LST, 2000-2023



Source: USGS Data

Table 4:
Temporal Change in LST, 2000-2023

Year	Max (°C)	Min (°C)	Mean (°C)	Standard Deviation(°C)
2000	28.35	19.49	24.02	1.16
2012	30.52	21.84	26.95	1.11
2023	32.04	25.11	28.84	0.90

Source: Based on Cell Values of Figure 1

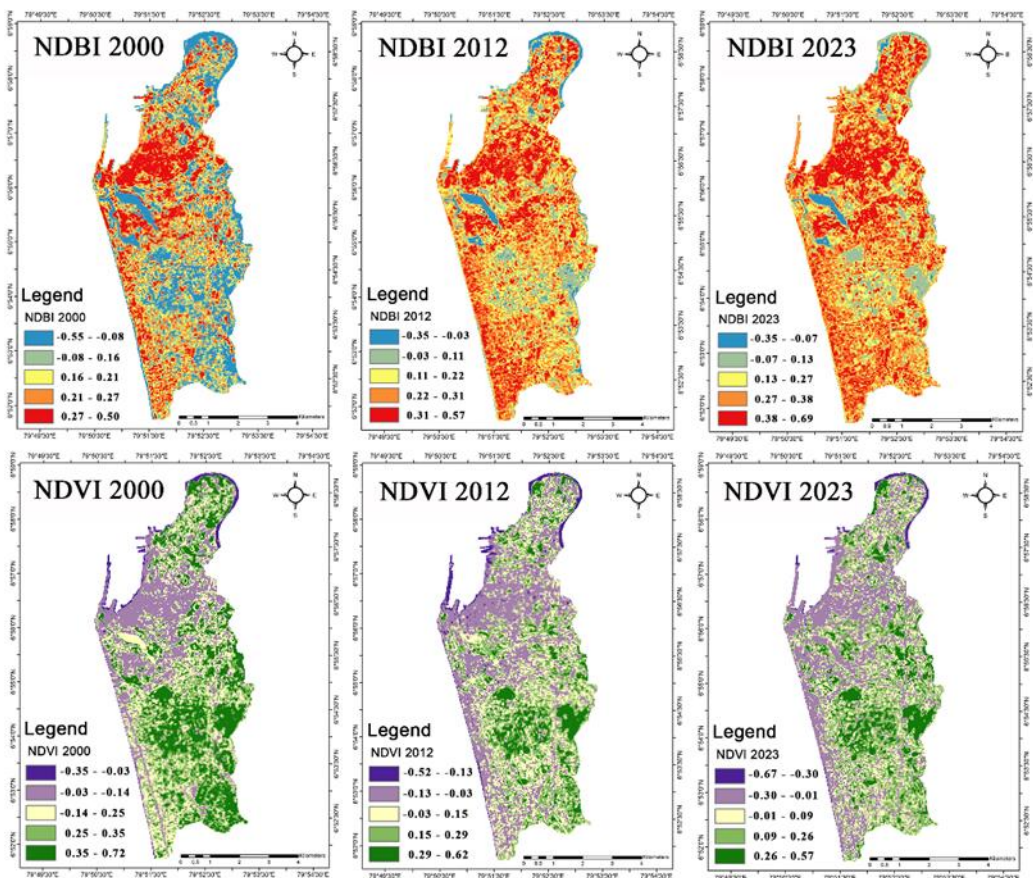
The analysis of temporal changes in LST reveals a significant warming trend over the study period (Table 4). The mean LST increased from 24.02°C in 2000 to 26.95°C in 2012, and further to 28.84°C in 2023, indicating a cumulative increase of 4.82°C over 23 years.

Spatial and Temporal Variations in NDBI and NDVI

The spatiotemporal analysis of CMC from 2000 to 2023 reveals a significant urban transformation characterised by the expansion of high-density built-up areas and a concurrent decline in vegetation cover. This trend is consistent with patterns observed in rapidly urbanising cities across developing countries (Seto et al., 2011). The study area experienced a marked shift from initially concentrated urban zones in the central north and southern coastal regions to a more expansive urban landscape along the western coast, particularly evident in areas such as Colombo 15, 13, and 6. This urban expansion coincided with a substantial reduction in green spaces, most notably along the Kelani River and in Colombo 08 and 15, with remaining vegetation largely confined to

small patches like Lunupokuna and Viharamahadevi Park by 2023 (Figure 3). The intensification of urban development in previously vegetated areas, including those surrounding Beira Lake and along the western coastal zones, aligns with findings from other studies on urban growth in South Asian cities (Subasinghe et al., 2016). This pattern of urbanisation, characterised by the conversion of vegetated and water-covered areas to built-up landscapes, raises important questions about sustainable urban development and the preservation of ecosystem services in rapidly growing cities (Grimm et al., 2008).

Figure 3:
Spatio-Temporal Change in NDBI, 2000-2023



Source: USGS Data

Table 5:*Temporal Change in NDBI and NDVI (2000-2023)*

Temporal Change in NDBI				
Year	Max	Min	Mean	Standard Deviation
2000	0.50	-0.55	0.17	0.12
2012	0.57	-0.35	0.21	0.11
2023	0.69	-0.39	0.29	0.13

Temporal Change in NDVI				
Year	Max	Min	Mean	Standard Deviation
2000	0.72	-0.35	0.21	0.24
2012	0.62	-0.52	0.10	0.14
2023	0.57	-0.67	0.062	0.16

Source: Based on Figure: 2 on Cell Values of LST

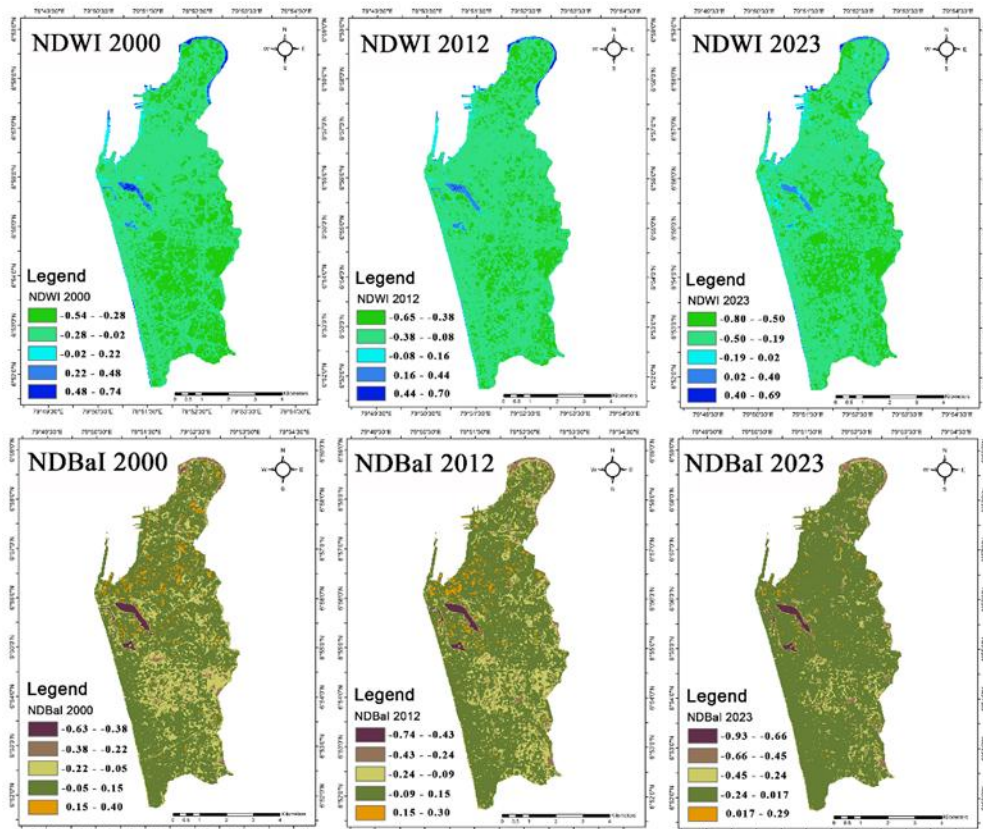
Table 5 illustrates significant temporal changes in both the NDBI and NDVI for the CMC from 2000 to 2023. The NDBI shows a consistent increase in mean values from 0.17 in 2000 to 0.29 in 2023, indicating a substantial expansion of built-up areas over the study period. This trend aligns with rapid urbanisation patterns observed in many developing cities (Seto et al., 2011). Conversely, the NDVI data reveals a marked decrease in mean values from 0.21 in 2000 to 0.062 in 2023, signifying a significant loss of vegetation cover. This inverse relationship between NDBI and NDVI is characteristic of urban growth occurring at the expense of green spaces, a phenomenon widely documented in urban ecology studies (Grimm et al., 2008). The increasing maximum NDBI values and decreasing minimum NDVI values further underscore the intensification of urban development and the reduction of vegetated areas. These changes have important implications for the urban heat island effects, ecosystem services, and overall urban sustainability (Estoque et al., 2017). The trends observed in the CMC reflect broader patterns of urban expansion in South Asian cities, highlighting the need for balanced urban planning that preserves green spaces while accommodating growth (Subasinghe et al., 2016).

Spatial and Temporal Variations in NDWI and NDBaI

The temporal analysis of the CMC from 2000 to 2023 reveals significant changes in water-covered areas and built-up density, as evidenced by variations in the NDWI and NDBaI.

Water-covered areas exhibited fluctuations, particularly notable along the western coastal boundary and in key water bodies like the Kelani River and Beira Lake. Concurrently, this urban expansion coincided with a substantial reduction in NDBaI, most notably along the built-up density, which demonstrated a marked increase, especially in the northern parts and along coastal areas, with significant intensification in Colombo 10, 11, 12, 13, and 15. The inverse relationship between water coverage and built-up areas reflects the challenges of balancing urban development with environmental conservation, a common issue in growing metropolitan areas (Estoque & Murayama, 2015). These changes underscore the need for sustainable urban planning strategies that can accommodate growth while preserving crucial water resources and green spaces (Grimm et al., 2008).

Figure 4:
Spatio-Temporal Change in NDWI and NDBaI, 2000-2023



Source: USGS Data

Table 6:*Spatio-Temporal Change in NDWI and NDBaI, 2000-2023*

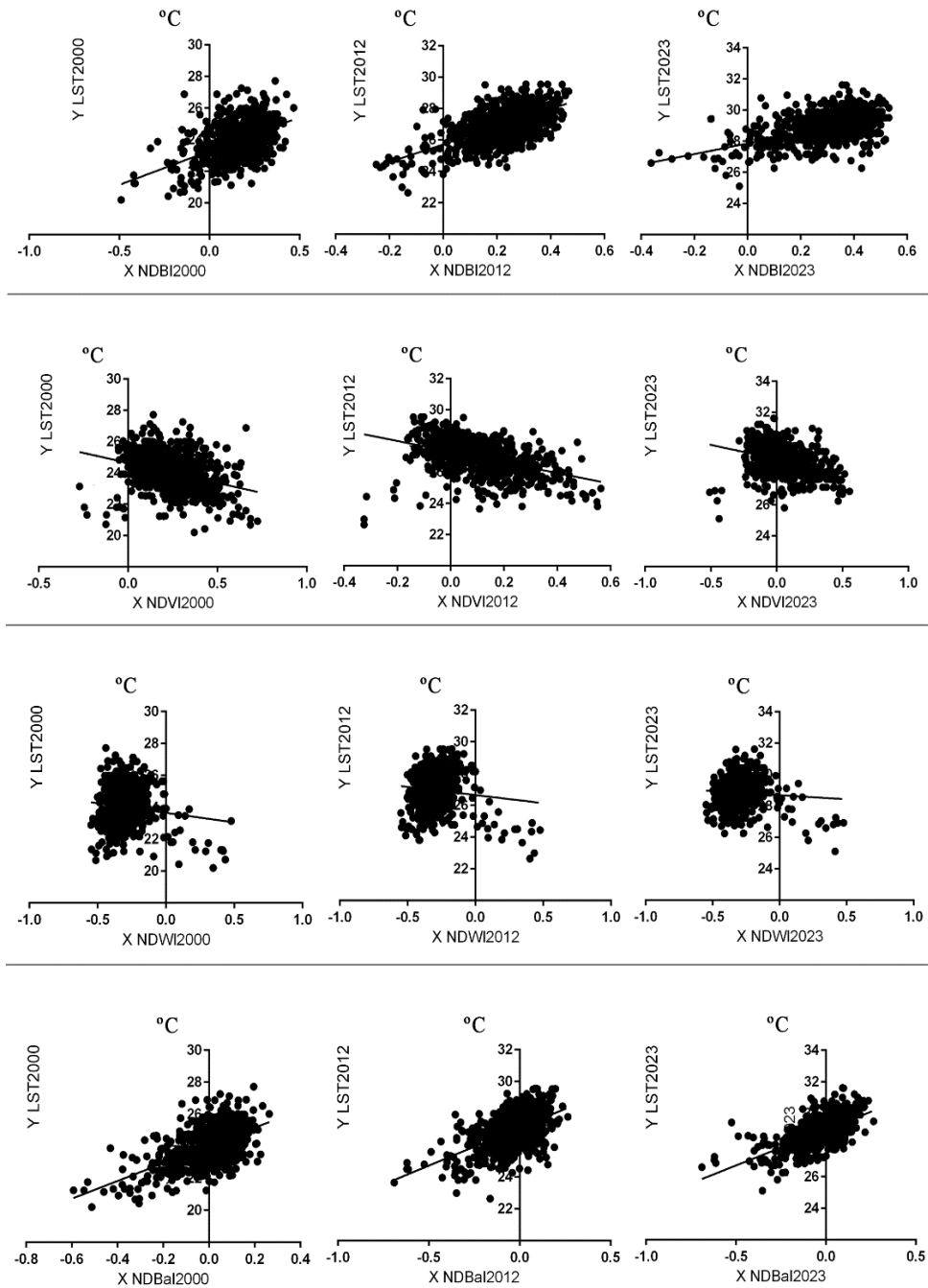
Temporal Change in NDWI				
Year	Max	Min	Mean	Standard Deviation
2000	0.55	-0.54	-0.22	0.12
2012	0.47	-0.65	-0.29	0.12
2023	0.39	-0.80	-0.40	0.15
Temporal Change in NDBaI				
Year	Max	Min	Mean	Standard Deviation
2000	0.40	-0.63	-0.066	0.12
2012	0.30	-0.74	-0.028	0.11
2023	0.29	-0.93	-0.19	0.13

Source: Based on Cell Values of Figure 3

Table 6 illustrates significant temporal changes in both the NDWI and NDBaI for the CMC from 2000 to 2023. The NDWI data shows a consistent decrease in mean values from -0.22 in 2000 to -0.40 in 2023, indicating a significant reduction in water-covered areas over the study period. This trend aligns with observed patterns of urban expansion and water body loss in rapidly developing cities (Xu, 2006). Conversely, the NDBaI data reveals an increase in mean values from -0.066 in 2000 to -0.19 in 2023, signifying an expansion of bare or built-up areas. The NDWI and NDBaI reflect the urbanisation process, where natural surfaces are replaced by impervious ones (Chen et al., 2018). The decreasing maximum NDWI values and increasing minimum NDBaI values further underscore the intensification of urban development at the expense of water resources. These changes have important implications for urban ecology, water management, and climate resilience in CMC (Ranagalage et al., 2017). The observed trends highlight the need for sustainable urban planning strategies that balance development with the preservation of crucial water resources and green spaces in rapidly growing urban areas (Giri et al., 2013).

Figure 5:

LST and variables- Correlation analysis in 2000, 2012 and 2023



Source: Regression Analysis based on Cell Values of Variables

Table 7:*LST and Variables- Correlation Analysis in 2000, 2012 and 2023*

Parameter	NDBI			NDVI			NDWI			NDBaI		
	2000	2012	2023	2000	2012	2023	2000	2012	2023	2000	2012	2023
R	0.46	0.61	0.59	-0.33	-0.44	-0.34	-0.13	-0.11	0.22	0.56	0.54	0.63
R²	0.21	0.37	0.35	0.11	0.19	0.11	0.017	0.013	0.052	0.32	0.29	0.40
P	0	0	0	0	0	0	0	0	0	0	0	0
Level of Correlation	Moderate Positive Correlation			Low Negative Correlation			Low Negative Correlation			Moderate Positive Correlation		

Source: Regression Analysis based on Cell Values of Variables

According to the above Figure 5 and Table 7 in 2000, 2012, and 2023, there is a moderate positive correlation between LST and two variables of urban land cover, which are NDBI ($R = 0.46$, $R = 0.61$, $R = 0.59$) and NDBaI ($R = 0.56$, $R = 0.54$, $R = 0.63$), while there was a slow negative correlation between the other two variables of LST and NDVI ($R = -0.33$, $R = -0.44$, $R = -0.34$) and NDWI ($R = -0.13$, $R = -0.11$, $R = -0.22$).

These findings suggest that as the NDBI and Index NDBaI increase, indicating higher levels of urbanisation and exposed surfaces, the LST tends to rise moderately. Conversely, an increase in the NDVI and NDWI, which represent vegetation cover and water bodies, respectively, is associated with a slight decrease in LST. These results align with the well-established phenomenon known as the Urban Heat Island Effect, where urban areas tend to experience higher temperatures due to the replacement of natural land cover with impervious surfaces and the concentration of human activities (Oke, 1982; Voogt & Oke, 2003). The presence of vegetation and water bodies can mitigate this effect by providing cooling through evapotranspiration and shading (Weng et al., 2004; Zhou et al., 2019).

Conclusion and Recommendations

This study reveals significant urban land cover transformation in the CMC from 2000 to 2023, characterised by expansion of high-density built-up areas,

a decline in vegetation cover, and a reduction in water bodies. The analysis shows a cumulative increase of 4.82°C in mean land surface temperature over the 23-year period, correlating with increased urbanisation. These changes align with patterns observed in rapidly urbanising and developing cities, highlighting challenges in balancing development with environmental conservation. Based on the study's findings, it is recommended to implement sustainable urban planning strategies that prioritise the preservation of green spaces and water bodies while accommodating growth. This should be coupled with the development of policies aimed at mitigating the Urban Heat Island effect through the incorporation of green infrastructure and water-sensitive urban design principles. Further research is crucial in understanding the long-term impacts of urban changes on ecology, climate resilience, and quality of life in Colombo. To support informed decision-making, it is essential to establish a comprehensive monitoring system to track the urban environment. Future work in this area should focus on integrating local climate data from meteorological departments and environmental agencies, providing a more comprehensive analysis of climate change trends in the region. These recommendations aim to balance urban development with environmental conservation, ensuring a sustainable and resilient future for CMC's urban landscape.

References

- Chen, X., Zhang, Y., & Xu, Y. (2018). Evaluating the effects of urban sprawl on rainfall-runoff processes using a paired-catchment experiment. *Journal of Hydrology*, 567, 237–246. <https://doi.org/10.1016/j.jhydrol.2018.10.021>
- Estoque, R. C., Murayama, Y., & Myint, S. W. (2017). Effects of landscape composition and pattern on land surface temperature: An urban heat island study in the megacities of Southeast Asia. *Science of The Total Environment*, 577, 349–359. <https://doi.org/10.1016/j.scitotenv.2016.10.195>
- Giri, C., Ochieng, E., Tieszen, L. L., Zhu, Z., Singh, A., Loveland, T., Masek, J., & Duke, N. (2013). Status and distribution of mangrove forests of the world using earth observation satellite data. *Global Ecology and Biogeography*, 22(1), 1–13. <https://doi.org/10.1111/j.1466-8238.2010.00584.x>
- Grimm, N. B., Faeth, S. H., Golubiewski, N. E., Redman, C. L., Wu, J., Bai, X., & Briggs, J. M. (2008). Global change and the ecology of cities. *Science*, 319(5864), 756–760. <https://doi.org/10.1126/science.1150195>
- Gunasekara, T. (2015). Geographical profile of Colombo, Sri Lanka.

Geographical Journal of Sri Lanka, 40, 37–49.

Jayasinghe, P., Raghavan, V., & Go, Y. (2017). Identifying relationship between land surface temperature and changes of vegetation cover and built-up areas in Colombo, Sri Lanka. *Proceedings of International Symposium on Remote Sensing 2017*, Osaka City University.

Mapalagama, W. M., Ratnayake, U., & Madawala, H. M. (2016). Tourism resources and attractions of Sri Lanka: A geographical analysis. *Procedia Economics and Finance*, 37, 96–103.

Rajapaksha, G., Nianthi, R., & Subasinghe, S. (2021). The spatial and temporal variation of land surface temperature in Colombo. *Proceedings of International Conference on Environmental and Medical Statistics PGIS 2020*, University of Peradeniya, Sri Lanka.

Ranagalage, M., Estoque, R. C., & Murayama, Y. (2017). An urban heat island study of the Colombo Metropolitan Area, Sri Lanka, based on Landsat data (1997–2017). *ISPRS International Journal of Geo-Information*, 6(7), 189. <https://doi.org/10.3390/ijgi6070189>

Seto, K. C., Fragkias, M., Güneralp, B., & Reilly, M. K. (2011). A meta-analysis of global urban land expansion. *PLoS One*, 6(8), e23777. <https://doi.org/10.1371/journal.pone.0023777>

Subasinghe, S., Estoque, R. C., & Murayama, Y. (2016). Spatiotemporal analysis of urban growth using GIS and remote sensing: A case study of the Colombo Metropolitan Area, Sri Lanka. *ISPRS International Journal of Geo-Information*, 5(11), 197. <https://doi.org/10.3390/ijgi5110197>

U.S. Geological Survey. (2024). *Earth Explorer: Satellite data*. Retrieved from <https://www.usgs.gov/>

Uduporuwa, R. J. M., & Manawadu, L. (2019). Quantifying the effect of surface covering materials on land surface temperature in urban areas utilising Landsat imageries: An investigation of Kandy City, Sri Lanka. *Bhumi*, 7(1), 32. <https://doi.org/10.4038/bhumi.v7i1.50>

Xu, H. (2006). Modification of normalised difference water index (NDWI) to enhance open water features in remotely sensed imagery. *International Journal of Remote Sensing*, 27(14), 3025–3033. <https://doi.org/10.1080/01431160600589179>

ANALYSIS OF COMMUNITY KNOWLEDGE, AWARENESS, AND PREVENTIVE PRACTICES OF THE DENGUE EPIDEMIC IN THE BADULLA DIVISIONAL SECRETARIAT DIVISION, SRI LANKA

S.M.N.S. Senanayaka^{1*}

¹*Department of Geography, University of Colombo*

Abstract

The research focused on analysing the community knowledge, awareness, and preventive practices of the dengue epidemic in the Badulla Divisional Secretariat Division (DSD) in the Badulla District. Data on the recorded dengue cases in the study area were obtained from the Medical Officer of Health (MOH) and, 102 patients were selected as a sample of 40% of the total number of dengue patients recorded in 2019 for the questionnaire survey. Likert scale, percentage, and descriptive statistics methods were used to accomplish the data analysis. According to the results, the study confirmed that all the surveyed dengue patients were aware of Dengue Fever (DF) and 93% of the patients were aware of Dengue Hemorrhagic Fever (DHF). In addition, the Likert scale confirmed that patients were aware of 6 of the 8 points asked concerning the dengue epidemic. Home inspection and public awareness programmes are the major measures to prevent the spread of the dengue epidemic in the study area.

Keywords: *Badulla Divisional Secretariat Division, Dengue Awareness, Dengue Prevention, Likert Scale*

**Corresponding author: Tel.: +94 (71) 015 2357;
Email: nisansalasenanayaka18@gmail.com;*

Introduction

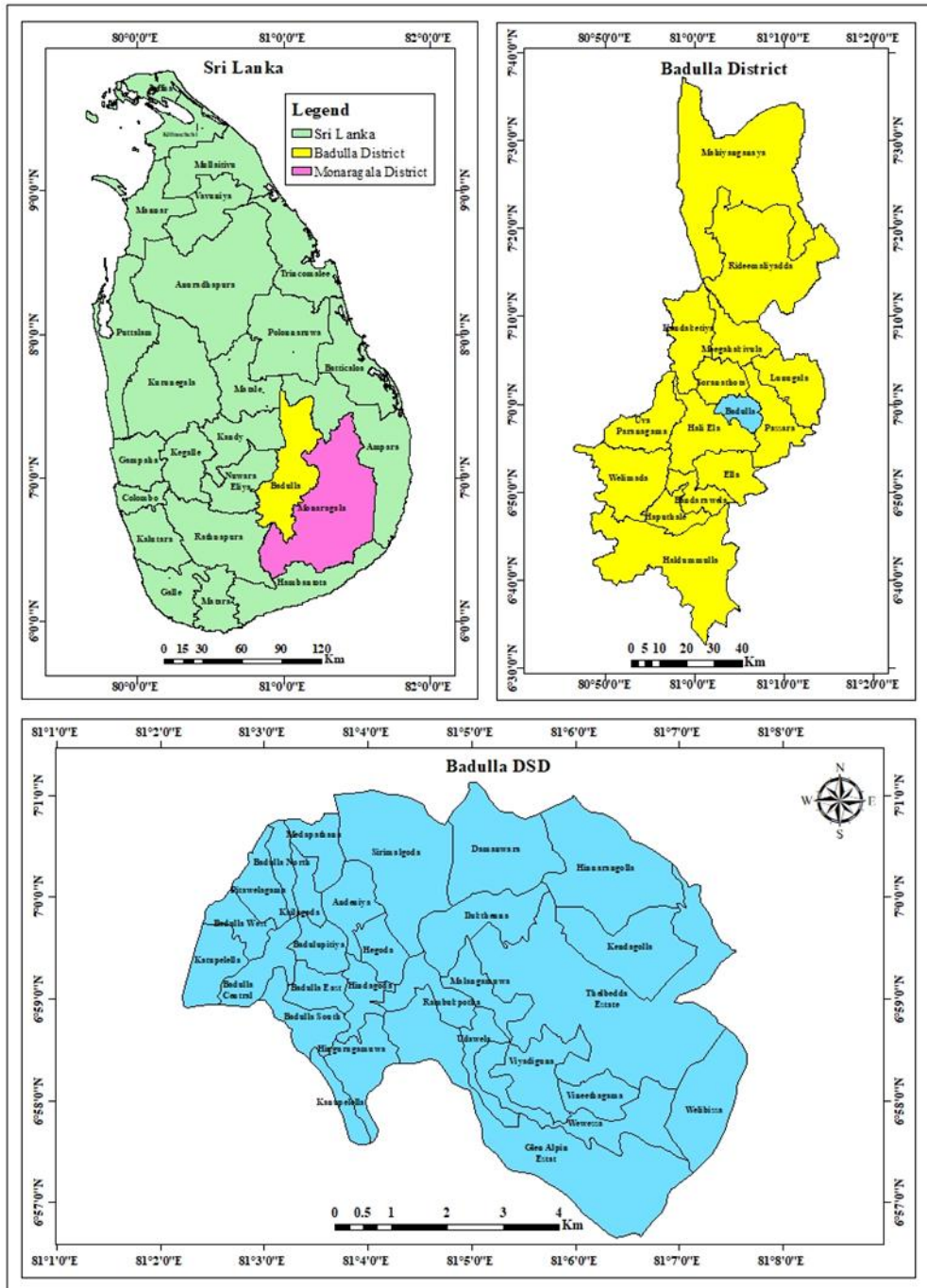
Dengue is a mosquito-borne viral disease widely spread in tropical and subtropical regions during the past few decades and has become one of the major public health issues. Dengue has become a challenge for both health and economic sectors in the world, with an estimated infection rate of 50-100 million infections per year. According to the National Dengue Control Unit in Sri Lanka, the total number of dengue cases reported during the period 2010-2023 is 689,091, and more than 28000 cases have been reported each year during this period. In 2017, Sri Lanka experienced a severe dengue epidemic (Tissera, et al., 2017), resulting in 186,101 suspected cases and 440 dengue-related deaths reported (WHO, 2022). This number is the highest number of suspected cases reported in a single calendar year in Sri Lanka since dengue was designated a notifiable disease in 1996. With this background, the research focused on analysing the community knowledge, awareness, and preventive practices of the dengue outbreak in the Badulla DSD. Most studies on dengue epidemics have primarily focused on various aspects of disease epidemiology and control. However, there has been limited research on patient awareness and perceptions regarding dengue, as well as on strategies for disease management, with most of these studies conducted solely in urban areas. This study, by contrast, encompasses rural, urban, and semi-urban areas. Therefore, this research is vital in planning strategies to control the dengue epidemic in Sri Lanka, not only in the study area.

Material and Methods

Objectives

The research aimed to analyse the community knowledge, awareness, and preventive practices of the dengue epidemic in the Badulla DSD, Sri Lanka (Figure 1). Hence, the objectives of the study were to analyse the patients' perception of the dengue epidemic and to evaluate the success of the strategies taken to prevent the dengue epidemic in the Badulla DSD.

Figure 1:
Location Map of the Study Area



Source: Compiled by the Author using ArcGIS 10.8 Software

Methodology

Both primary and secondary data were considered for the study. Data on dengue cases reported in the study area during the year 2019 was obtained from the MOH in Badulla. In 2019, 635 dengue cases were reported in the study area, but among them, the total number of dengue cases that could be identified according to their Grama Niladhari divisions (GNDs) was 235. From this group, a sample of 40% (102 patients) was selected for the questionnaire survey using a stratified random sampling technique. To analyse patients' perceptions of the dengue epidemic, a 4-point Likert scale was utilised, with response options of disagree, slightly agree, agree, and strongly agree. Additionally, data analysis was conducted using percentages, descriptive statistical methods, and Microsoft Excel software.

Results and Discussion

Analysis of the Patients' Perception of the Dengue Epidemic

When analysing patients' awareness of dengue disease, it was found that all surveyed patients (100%) were aware of DF, while 93% were aware of DHF. To assess the perception of dengue patients regarding the epidemic, their opinions were collected through the questionnaire survey. The patients' perceptions were then analysed based on their responses.

According to the results obtained from the Likert scale, the awareness of the dengue epidemic is considered as a Likert value < 2.55 = disagree and the Likert value ≥ 2.55 = Agree. Thus, 8 points were considered to identify the patients' awareness of the dengue epidemic in the study area, which are shown below.

1. Dengue is a disease transmitted by a virus.
2. The virus is ingested through the skin.
3. There are 5 types of dengue virus.
4. The vector of dengue is the Aedes mosquito.
5. Female Aedes mosquitoes suck blood.
6. Mosquitoes bite mostly in the morning and the evening.
7. The incubation period (period of symptoms) of dengue is 14 days, but most often it is 4 to 7 days).
8. Dengue can be spread through blood transfusion or organ transplant.

As shown in Table 1, the Likert scale values for the 3 and 8 points are below 2.55 (Likert value < 2.55), indicating a lack of patient awareness regarding these points. On the other hand, the Likert scale confirmed that the patients were aware of 6 of the 8 points presented to the patients (Likert value ≥ 2.55).

Table 1:

The Results Obtained from the Likert Scale Concerning Patients' Awareness of the Dengue Epidemic in the Study Area

Points	More successful	Successful	Moderately successful	Not successful	Likert Ratio	Conclusion
01	1.61	0.79	0.27	0.20	2.87	Agree
02	0.94	1.12	0.33	0.23	2.62	Agree
03	0.08	1.24	0.59	0.27	2.18	Disagree
04	1.92	1.24	0.22	-	3.38	Agree
05	2.08	1.12	0.20	0.01	3.41	Agree
06	1.80	1.41	0.16	-	3.37	Agree
07	0.71	1.50	0.53	0.06	2.80	Agree
08	0.75	1.15	0.41	0.23	2.54	Disagree

Source: Compiled by the Author from a Questionnaire Survey

Evaluation of the Success of the Strategies Taken to Prevent the Dengue Epidemic in the Badulla DSD

Out of the 102 patients who responded to the questionnaire survey, 83 patients (81%) mentioned that necessary strategies are being taken to prevent the dengue epidemic in the study area. Table 2 shows results obtained from the Likert scale concerning patients' opinions of the strategies taken to prevent the dengue epidemic. As shown in Table 2, the Likert scale values for all dengue prevention strategies exceed 2.55 (Likert value ≥ 2.55), indicating that patients believe these methods have effectively contributed to controlling the dengue epidemic in the study area.

Table 2:

The Results Obtained from the Likert Scale Regarding Patients' Opinions on the Strategies Implemented to Prevent the Dengue Epidemic

Dengue prevention strategies in the study area	More successful	Successful	Moderately successful	Not successful	Likert Ratio	Conclusion
Dengue Fumigation	0.71	1.56	0.35	0.13	2.75	Successful
Entomological Surveys	1.18	1.29	0.37	0.09	2.64	Successful
Inspection of Houses and Surroundings	0.86	1.12	0.49	0.17	3.25	Successful
Public Awareness Programmes	1.84	1.12	0.24	0.05	2.93	Successful

Source: Compiled by the Author from a Questionnaire Survey

Conclusion and Recommendations

Most dengue patients surveyed in the study area are aware of both DF and DHF. Additionally, they are aware that dengue is a viral disease transmitted by the Aedes mosquito. Moreover, the patients are aware that the virus is ingested through the skin by the bite of female Aedes mosquitoes, which suck blood, and that the incubation period for dengue (time until symptoms appear) is 14 days. Many patients are unaware that there are five types of dengue virus and that dengue can be transmitted through blood transfusions or organ transplants. However, they are knowledgeable about the strategies to follow when infected with dengue. Thus, patients are aware of dengue disease through several media, among which television and health officials are prominent. Dengue fumigation, entomological surveys, home, and surrounding inspection, and public awareness programmes are the main strategies to prevent the dengue epidemic in the study area. The patients agreed that these programmes are successful strategies for controlling the dengue epidemic in the area and, this was also confirmed by the Likert Scale. Furthermore, the research suggests that control of mosquito populations is the primary preventative measure to reduce the dengue epidemic.

References

- Hossain, M. I., Alam, N. E., Akter, S., Suriea, U., Aktar, S., Shifat, S. K. Mohiuddin, A. (2021). Knowledge, awareness and preventive practices of dengue outbreak in Bangladesh: A countrywide study. *PLoS One*, 16(6). <https://doi.org/10.1371/journal.pone.0252852>
- Jayawickreme, K. P., Jayaweera, D., Weerasinghe, S., Warapitiya, D., & Subasinghe, S. (2021). A study on knowledge, attitudes, and practices regarding dengue fever, its prevention, and management among dengue patients presenting to a tertiary care hospital in Sri Lanka. *BMC Infectious Diseases*, 21(981). <https://doi.org/10.1186/s12879-021-06685-5>
- Tissera, H., Jayamanne, B., Raut, R., Janaki, S. M., Tozan, Y., Samaraweera, P. C., Fernando, S. D. (2017). Severe dengue epidemic, Sri Lanka. *Emerging Infectious Diseases*, 26(4), 682–691. <https://doi.org/10.3201/eid2604.190435>
- Vyas, D., Kavaiya, P., Parmar, R., & Patel, R. (2021). A study to assess the knowledge, awareness, and preventive practices regarding dengue fever among patients visiting medical OPD at Civil Hospital, Nadiad City. *Journal of Pharmaceutical Research International*, 33(60B), 2421–2426. <https://doi.org/10.9734/jpri/2021/v33i60B34895>
- WHO. (2022). Dengue fact sheet and situation report. *World Health Organization*. https://cdn.who.int/media/docs/default-source/sri-lanka-documents/dengue-fact-sheet_7-2022-srl.pdf?sfvrsn=49021bd_1

THE RELATIONSHIP BETWEEN DIAMETER AND DEPTH OF POTHOLES ERODED BY FLOWING WATER IN KURU RIVER, SRI LANKA

U. L. A. S. Priyakumara^{1*}, Pathmakumara Jayasingha²

^{1, 2}*Department of Geography, University of Colombo*

Abstract

Potholes are an important category of erosional sculpted forms from open bedrock channels. Understanding the relationship between the diameter and depth of these potholes can provide insights into the erosive processes and hydrodynamic conditions that shape riverbeds. This study examines the correlation between the diameter and depth of the potholes in the Kuru River. The Pearson correlation coefficient was used to identify it. All locations of potholes exhibit significant deepening and widening. At certain locations, the mean depth is higher than the diameter. It shows that vertical corrosion is higher than horizontal corrosion on rocks by sediment load. A positive correlation exceeding 0.6 exists between diameter and depth at five of the six locations. Accordingly, it appears that this relationship is compatible with the proportional growth theory. High sediment loads enhance pothole dimensions. The study confirms a positive correlation between diameter and depth in potholes of the Kuru River due to sediment dynamics.

Keywords: *Potholes, Diameter-Depth, Relationship, Kuru River, Fluvial Erosion*

*Corresponding author: Tel.: +94 (76) 4759365; Email: achinhasumudu@gmail.com;
<https://orcid.org/0009-0004-1015-0157>

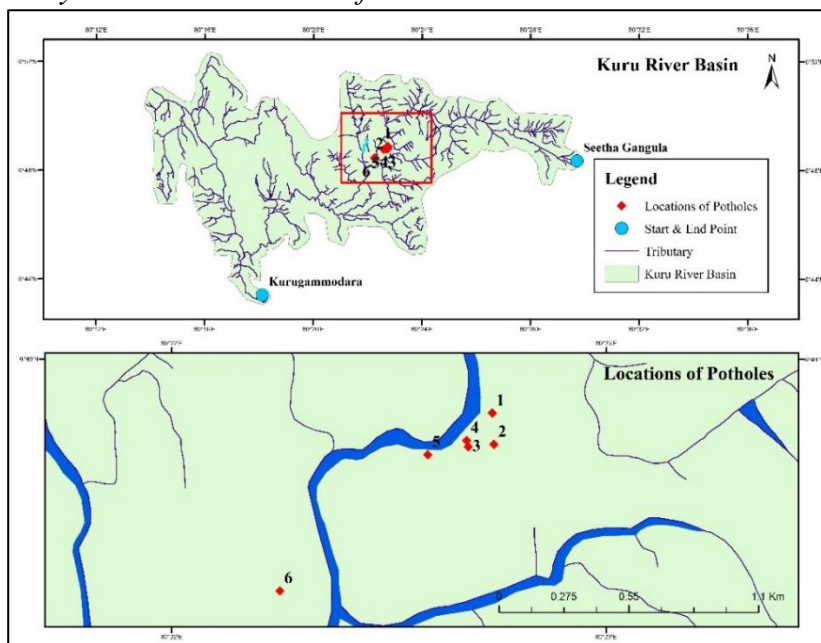
Introduction

Potholes, also known as rock-cut basins, are cylindrical or hemispherical holes formed in the bedrock of riverbeds due to the erosive action of running water (Bera et al., 2021). Potholes are formed and originated by corrosion in rivers by the potential energy of fast-flowing water; the bed of the river is covered with uneven fragments of stones, boulders, gravels, and pebbles carried by the river whirl around, drilling circular oval or elongated depressions into the river bed. (Dhali & Biswas, 2017). These geological features are particularly prominent in areas of the young stage of rivers with strong water flow, such as the Kuru River in Sri Lanka. The Kuru River is characterised by a combination of rapid water flow and a rocky riverbed. The river's dynamics, including seasonal variations in water volume and speed, contribute to the formation and evolution of potholes. Understanding pothole depth-diameter relation aids in studying riverbed evolution under varying hydrodynamic conditions. Accordingly, this study aims to find the correlation between the diameter and depth of potholes in the Kuru River and understand the influence of hydrodynamics in erosive processes that produce potholes.

Study Area

Figure 1:

Study Area and Locations of Potholes



Source: Based on the data of the Irrigation Department of Sri Lanka, 2019

The Kuru River basin was selected as the study area. The Kuru River starts its

journey from Sīta Gaṅgula, the narrow valley between Bāna Samanala Kanda and Siripā Kanda, and joins the Kalu River at Kurugammōdara in the Kiriella area. Kuru River begins at a height of 2250 meters above mean sea level. Kuru River is located between Northern latitudes 60 47/ - 60 51/ and Eastern longitudes 800 17/ - 800 30/ (Jinadasa and Herath, 2000). The length of the Kuru River is 23.03km. The area of the Kuru River is 8.61km² (Jayasinghe and Pitawala, 2022).

The Kuru River basin is located along the Sabaragamu mountain range, the western slope of the Central Highlands in terms of the topographic regions of Sri Lanka. It is extraordinary to have a series of parallel ridges extending northwest and southeast between the central mountains and the plateau region. According to the geological classification, this river basin belongs to the highland complex. Metamorphosed rock types are encountered here mainly. Accordingly, gneiss and charnockite can be identified as the principal rock types that can be identified in this area (Cooray, 1994).

Material and Methods

Potholes do not exist everywhere in the river and potholes can be identified widely in the selected area shown in Figure 1. Accordingly, this study has been conducted using 266 potholes in 6 locations. Major and minor axes lengths (a and b) and the depth of each pothole were measured using a measuring tape and a measuring rod. The depth of a pothole was measured from the surface to the deepest point.

The mean diameter ($D = \sqrt{ab}$) was calculated using the major and minor axes lengths (Ji, Li & Zeng, 2018). The Pearson correlation coefficient was employed to identify the nature of the relationship between the diameter and the depth of potholes. The Strength of the Pearson correlation coefficient is given in Table 1.

Table 1:

Strength of Pearson Correlation Coefficient

Value of Pearson Correlation Coefficient	Relationship
0.00 - 0.19	Very Weak
0.20 - 0.39	Weak
0.40 - 0.59	Moderate
0.60 - 0.79	Strong
0.80 - 1.00	Very Strong

Source: Evans, 1996

Results and Discussion

Diameter and Depth of Potholes

Table 2:

Mean Diameter and Mean Depth of the Potholes

Location	Number of Potholes	Mean Diameter (cm)		Depth (cm)	
		Mean	SD (σ)	Mean	SD(σ)
1	22	36.4	26.9	27.6	21.6
2	65	41.0	49.4	53.4	48.7
3	51	54.7	55.3	57.9	60.4
4	50	48.0	44.0	46.0	41.9
5	47	37.1	40.9	34.6	44.9
6	31	83.5	45.2	63.6	23.6

Source: Field Study Data, 2024

The highest mean diameter (83.5cm) as well as the highest mean depth (63.6cm) can be identified in location 6 (Table 2). Accordingly, it appears that the vertical erosion as well as the lateral erosion by the sediment carried by the flowing water is high in location 6.

The primary mechanisms for pothole formation are abrasion by sediments and cavitation caused by turbulent water flow (Ji, Li & Zeng, 2018). The diameter and depth of potholes can indicate the intensity and nature of these processes. A wider and deeper pothole suggests more prolonged or intense erosive action. Therefore, it appears that the vertical and horizontal erosion by the flowing water is highest in location 6.

The size and distribution of sediments within the water flow affect the erosion rate and the dimensions of potholes. Larger particles typically lead to more pronounced deepening, while finer sediments can contribute to the lateral widening of the pothole. Accordingly, the deepening of potholes by large particles has mostly occurred in locations 6, 3, 2, 4, 5 and 1 respectively. Also, the lateral widening of the potholes by the finer particles is mostly in locations 6, 3, 4, 2, 5 and 1 respectively.

Statistical Relationship between the Diameter and Depth of Potholes

Table 3:

Pearson Correlation Coefficient between the Diameter and Depth of Potholes

Location	1	2	3	4	5	6
Pearson Correlation Coefficient	0.90	0.73	0.88	0.68	0.89	0.48
Level of Significance	0.01	0.01	0.01	0.01	0.01	0.01

Source: Field Study Data, 2024

According to the Pearson correlation coefficient shown in Table 3, there is a direct relationship between diameter and depth in each location. It can be said with 99% confidence that there is a very strong positive correlation with locations 1, 3 and 5, a strong positive correlation with locations 2 and 4 and a moderate positive correlation with location 6. It can be pointed out that the cause of a very strong positive relationship in relation to locations 1, 3 and 5 is that vertical corrosion is also caused by the amount of horizontal corrosion. It can be attributed to the fact that the rocks that are directly exposed to corrosion both horizontally and vertically on the rock plane are mostly spread around those locations. On the other hand, the reason for the decrease in the positive correlation in relation to positions 2, 4 and 6, respectively, may be due to the fact that the rocks that are more eroded horizontally and the rocks that are less eroded vertically are gradually located.

The dimensions of potholes, specifically their diameter and depth, are indicators of the erosive power and the duration of erosion processes. There are two main hypotheses regarding this process. The first one is the 'Proportional Growth Hypothesis' which suggests a linear relationship where the depth and diameter increase proportionally over time (Springer, Tooth & Wohl, 2006). The second one is the 'Exponential Growth Hypothesis' which proposes that the diameter grows more rapidly than the depth, leading to a wider and shallower pothole over time (Springer, Tooth & Wohl, 2006). In the present study, there is a positive correlation between depth and diameter. According to this study, it can be accepted that the 'Proportional Growth Hypothesis' is true spatially.

A higher sediment load can enhance both the depth and diameter of potholes, as there are more particles available to abrade the bedrock. The relationship between diameter and depth can indicate the sediment concentration in the flow. Due to the existence of a positive correlation between the diameter and

depth of the potholes around the Kuru River, it can be inferred that a relatively higher concentration of sediment flows through each location.

Conclusion and Recommendations

In conclusion, the study reveals that location 6 exhibits the largest mean diameter and depth of potholes, indicating significant erosive activity. The primary mechanisms contributing to pothole formation include abrasion by sediments and cavitation from turbulent water flow. The Pearson correlation coefficient indicates a positive correlation between diameter and depth across all locations, supporting the 'Proportional Growth Hypothesis'. This correlation suggests that the sediment load in the Kuru River enhances the erosive processes, resulting in proportional increases in pothole dimensions. The relationship between the diameter and depth of potholes is determined by the vertical and horizontal corrosion caused by the sediment load. The positive correlation between diameter and depth increases as vertical corrosion and horizontal corrosion increase proportionally. Overall, the findings highlight the significant impact of sediment concentration and flow dynamics on pothole development.

References

- Bera, B., Bhattacharjee, S., Chamling, M., Ghosh, A., Sengupta, N., & Ghosh, S. (2021). Relationship between diameter and depth of potholes controlled by lithology and structure in the Rarh region of India. *Current Science*, 120(4), 697–703.
- Cooray, P. G. (1994). The Precambrian of Sri Lanka: A historical review. *Precambrian Research*, 66(1–4), 3–18.
- Dhali, M. K., & Biswas, M. (2017). Geo-hydrological response to pothole formation: A quantitative study of Kharsoti River, India. *Modeling Earth Systems and Environment*, 3(4), 1–11.
- Ji, S., Li, L., & Zeng, W. (2018). The relationship between diameter and depth of potholes eroded by running water. *Journal of Rock Mechanics and Geotechnical Engineering*, 10(5), 818–831.
- Springer, G. S., Tooth, S., & Wohl, E. E. (2006). Theoretical modeling of stream potholes based upon empirical observations from the Orange River, Republic of South Africa. *Geomorphology*, 82(1–2), 160–176.

ENHANCING URBAN SUSTAINABILITY: POTENTIAL GREEN SPACES IN THE KANDY MUNICIPAL COUNCIL

B.G.S.S. Sandamali^{1*}, E.M.T.K Senevirathna²

^{1, 2}*Department of Geography and Environmental Management
Faculty of Social Sciences and Languages*

Abstract

Increasing Green Space (GS) enhances the interrelationship between the external and internal environments of humans. It contributes to physical and mental well-being. This study focused on identifying the potential of GS to foster sustainable urban life in the Kandy Municipal Council (KMC) of Sri Lanka by identifying the extent of Urban Green Spaces (UGS) and analysing the required GS for new GS development. The analysis was conducted using satellite images, and population data from 2022. The Green Space Per Capita Index (GSPCI) recommended by the UN for a healthy life is calculated using ArcGIS 10.4. The Normalised Difference Vegetation Index (NDVI) value of KMC was determined from satellite images to find out existing GS. Green space in 40 divisions was examined separately. Of these, 35 divisions exceeded the recommended level of green space per person, while 5 divisions were deficient. These findings highlighted the need for targeted efforts to increase green space in these areas to meet recommended standards.

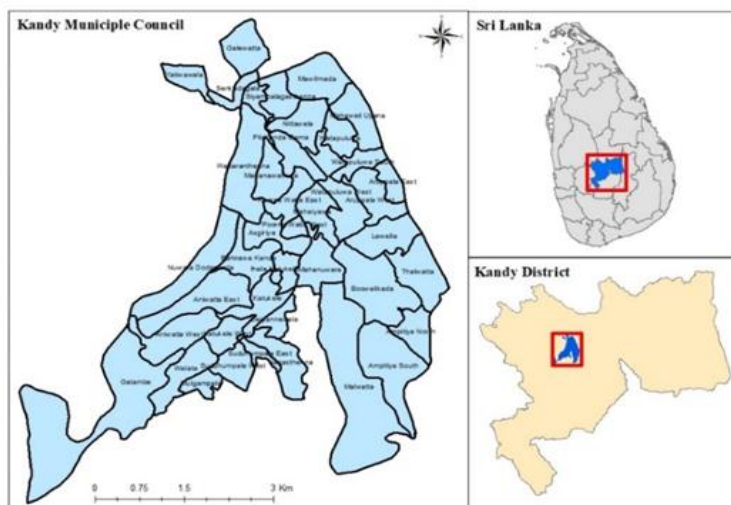
Keywords: *Geographical Information System (GIS), Green Space Per Capita Index (GSPCI), Kandy Municipal Council (KMC), Normalised Difference Vegetation Index (NDVI), Urban Green Space (UGS)*

*Corresponding author: Tel.: +94 (71) 848 6076

Introduction

Rapid industrialisation expands areas of urban sprawl while significantly increasing urban population density. 56% of the world's population resided in urban areas as of year 2010. In 2050, the population residing in urban areas is expected to be doubled in developing countries (World Bank Group, 2023). Rapid population growth and industrialisation lead to increased construction and loss of vegetation cover. Urbanisation also causes environmental pollution from factory emissions, vehicle exhaust, waste disposal, and human activities (Senanayake et al., 2013). With urbanisation in Kandy, which has the highest air pollution in Sri Lanka, the healthy lifestyle of city dwellers is being impacted (National Building Research Organization, 2024). Developing GS can improve their living conditions. According to the UN standards, each person should have 30m² of green space for a healthy life (Wijewardhana and Senevirathne 2021). Therefore, this study mainly focuses on identifying potential green spaces in the KMC. Additionally, this involves recognising existing green spaces, analysing the need for additional green spaces, and exploring suitable green space types for KMC. Kandy is the second-largest city in Sri Lanka and consists of 5 divisions within the KMC (Figure 1). The total land area here is 26.5 km².

Figure 1:
Study Area



Source -1:50,000 Digital Data, Survey Department of Sri Lanka, 2008

Material and Methods

This study was carried out using shapefiles, satellite images, and population data of the KMC from the year 2022. Landsat 9 satellite images downloaded from the United States Geographical Survey (USGS) were used to calculate the Normalised Difference Vegetation Index (NDVI) to identify existing GS. When calculating GS, the population related to each Grama Niladhari Division (GND) and its GS is identified separately and the GS index is used to determine the amount of GS per person in that division. Using this result, it is determined whether or not the value required for a person to live a healthy life, as specified by the UN, is present in these GNs and after that, the required amount of GS needed for each GN division in square meters (m²) is determined.

To calculate green space, which is the main objective of this study, two analyses were performed. First, a classification is done using satellite images creating NDVI maps. The NDVI values are then divided into two using a histogram to facilitate the identification of GS. Since these values are not permanent, they are reclassified using a reclassification tool. As it is impossible to get a result from the raster format, it is converted to vector format.

When calculating GS, the population related to GN divisions and GS should be identified separately (Table 1). After that, the GS index is used to determine the amount of GS per person in that domain. Using this result, it is determined whether or not the value required for a person to live a healthy life, as specified by the UN, is present in these GNs and after that, the required amount of GS needed for each GN division in square meters (m²) is determined.

Table 1:

Existing GS (m²)

Division Name	GS (m²)
Ampitiya North	336617
Ampitiya South	1012595
Aniwatta East	758484
Aniwatta West	625373
Aruppala East	140813
Aruppala West	387148
Asgiriya	341920
Bahirawa Kanda	475248
Boowelikada	898074
Deiyannewela	40859

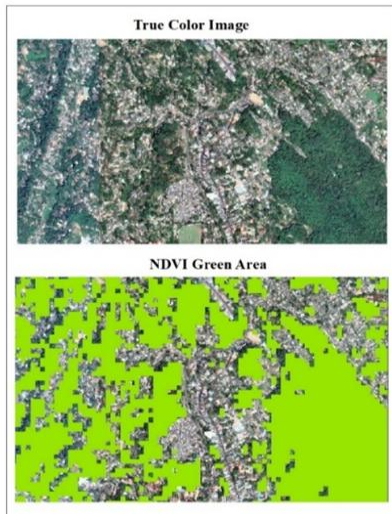
Galewatta	411556
Gatambe	2063298
Ihala Katukele	159958
Katukele	258453
Katukele West	99487
Lewella	516346
Mahaiyawa	291845
Mahanuwara	183926
Mahaweli Uyana	404324
Malwatta	2109881
Mapanawathura	364714
Mawilmada	500165
Mulgampala	89461
Nagasthenna	430467
Nittawela	414609
Nuwara Dodanwala	706743
Pitakanda Gama	337956
Poorna Watta East	266662
Poorna Watta West	40701
Senkadagala	46194
Siyambalagasthenna	219270
Suduhumpala East	73267
Suduhumpala West	272830
Thalwatta	607224
Watapuluwa	282761
Watapuluwa South	196252
Watapuluwa West	652365
Wattaranthenna	756283
Welata	258452
Yatiwawala	250529

Source: Developed by Author based on USGS Satellite Image, Urban Development Authority and Resource Profile in Kandy, 2022

Results and Discussion

The analysis of population maps for the KMC revealed that the GN division 40, under KMC's jurisdiction, has a population of 112,229 and spans 24,024,394.11 square meters. According to the resource profile in Kandy DSD in 2022, the Yatiwawala division has the highest population at 5,711 over 290,225.46 square meters, while Mahaweli Garden has the lowest population

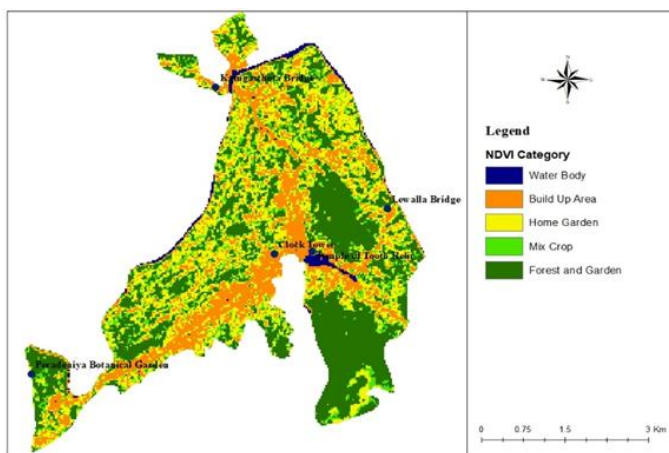
Figure 4:
Green Area Accuracy Assessment



Source: Created by Author Based on Landsat Image from USGS Google EarthPro, 2022

NDVI values in the KMC area are divided into five categories to reflect different levels of vegetation health. Areas like the Mahaweli River and Kandy Lake showed no vegetation, while major highways displayed very low vegetation due to urban infrastructure development. The map also identified regions with varying vegetation densities, indicating the need for GS interventions in low vegetation areas (Figure 5).

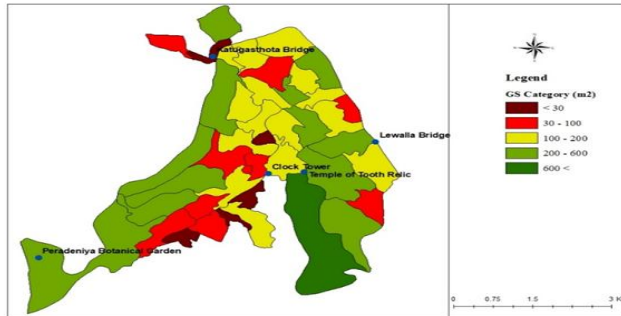
Figure 5:
NDVI Classification



Source: Created by Author Based on Landsat Image from USGS, 2022

The analysis revealed that in five divisions where green space is less than the United Nations recommended size of 30 m² per capita, results are divided into five levels (Figure 6). This is due to the presence of natural forests and a significant level of vegetation cover.

Figure 6:
Existing GS Level (m²)



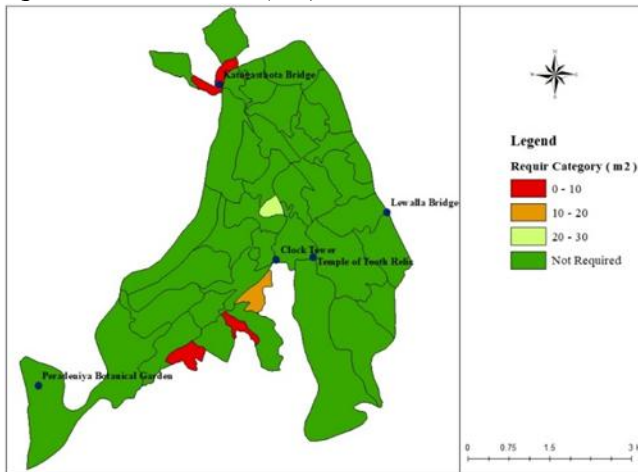
Source: Created by Author Based on Landsat Image from USGS, 2022

Table 2 and Figure 7 illustrate the GNDs that already have sufficient GS and identify the additional areas required to meet recommended standards in other divisions, contributing to a more balanced and sustainable urban environment.

Table 2:
Existing GS and Required GS (m²)

GND	Population	GS	GSPC	Require GS area
Mulgampala	3738	89461	23.933	6.067
Suduhumpala East	2920	73267	25.091	4.908
Deiyannewela	3168	40859	12.897	17.102
Poornawatta West	5540	40701	7.3467	22.653
Senkadagala	2085	46194	22.155	7.8446

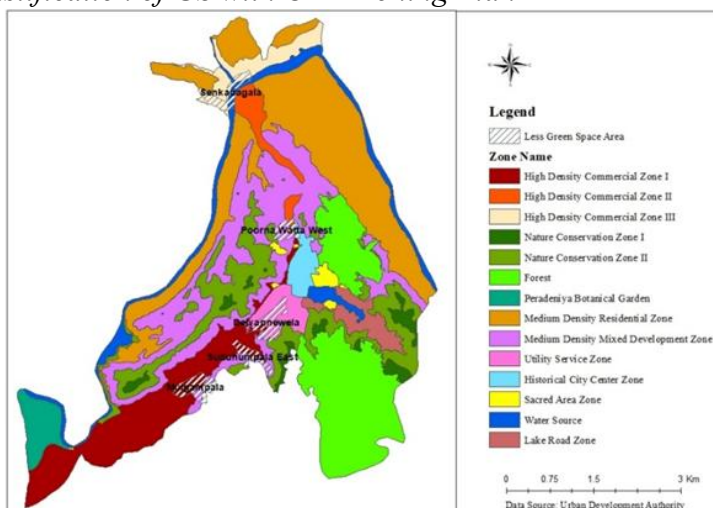
Figure 7:
Required GS Amount (m2)



Source: Created by Author Based on Landsat Image from USGS, 2022

According to UDA's proposed zoning plan (Figure 8) Poornawatta West GND located within the Medium Density Mixed Development Zone, combines residential, commercial, and other uses, limiting large green spaces. Senkadagala GND located in a High-Density Commercial Zone 3, has a high concentration of buildings and infrastructure, reducing open green areas. Deiyannawela GND categorised as a Utility Service Zone, focuses on infrastructure and services that constrain space for green areas. Part of Suduhumpola East and Mulgampala belong to High-Density Commercial Zone 1, with other parts in the Medium-Density Mixed Development Zone.

Figure 8:
Justification of GS with UDA Zoning Plan



Source: Created by Author Based on UDA Zoning Plan, 2022

The increase in GSs in urban areas brings numerous benefits to residents, enhancing their quality of life in various ways. The presence of greenery helps create a more pleasant living environment and contributes to residents' overall well-being by offering areas for recreation and relaxation (Erlwein et al., 2021). Activities such as nature observation, bird watching, and photography, which are often associated with urban green spaces, can deepen people's connection to nature, further enhancing mental health (Schmidt et al., 2016).

Research has consistently shown that GSs positively influence the longevity and well-being of urban residents. A study of 3,144 seniors in Tokyo demonstrated that living in neighbourhoods with accessible parks and walkable green areas contributed to longer life expectancy, regardless of other factors like age, income, or health status (Takano et al., 2002). Another study found that frequent visits to neighbourhood parks improved the self-reported health of older women in a Helsinki nursing home (Rappe et al., 2006). These spaces provide safe play areas and positively affect children's cognitive, physical, mental, and social development, as well as their education (Levent & Nijkamp, 2009).

The ecological functions of GSs are equally important. They contribute to carbon storage, oxygen production, and air quality maintenance while conserving soil, buffering noise, and regulating rainfall and humidity. By helping to mitigate environmental degradation caused by urban expansion, GSs promote biodiversity and support the conservation of local flora and fauna (Levent and Nijkamp, 2009; Irvine et al., 2009). Research has shown that proximity to green areas increases the economic value of nearby properties, making these spaces not only environmentally beneficial but also financially advantageous for urban development (Zhang et al., 2012; Özgüner et al., 2012).

Conclusion and Recommendations

To achieve the study's objectives, focusing on the 40 divisions of KMC, it was found that the GS in 35 of these divisions exceeded the UN standard of 30 square meters per person, highlighting that most of KMC. The generally high levels of GS are primarily due to substantial natural reserves like Udawatta forest and Dunumadalawa forest reserve and good vegetation cover across the area contributes to significantly boosting the overall GS availability.

However, the study also identified five divisions falling short of this standard, requiring targeted interventions. According to the UDA zoning plan, it seems

that there has been a decrease in GS in the areas where the population is very high and commercialisation is common. This explains the tendency for GS to decrease with urbanisation. By addressing the identified shortfalls, KMC can ensure equitable access to green spaces, enhancing the quality of life for all residents.

References

Baycan-Levent, T., & Nijkamp, P. (2009). Planning and management of urban green spaces in Europe: Comparative analysis. *Journal of Urban Planning & Development*.

Erlwein, S., Zölch, T., & Pauleit, S. (2021). Regulating the microclimate with urban green in densifying cities. *Building and Environment*.

Irvine, K. N., Devine-Wright, P., Payne, S. R., Fuller, R. A., Painter, B., & Gaston, K. J. (2009). Green space, soundscape, and urban sustainability: An interdisciplinary, empirical study. *Local Environment*.

Rappe, E., Kivela, S. L., & Rita, H. (2006). Visiting outdoor green environments positively impacts self-rated health among older people in long-term care. *HortTechnology*.

Resource profile. (2022). Kandy.

Schmidt, K., Walz, A., Jones, I., & Metzger, M. J. (2016). The sociocultural value of upland regions in the vicinity of cities in comparison with urban green spaces. *Mountain Research and Development*.

Senanayake, I. P., Welivitiya, W. D. D. P., & Nadeeka, P. M. (2013). Urban green spaces analysis for development planning in Colombo, Sri Lanka, utilizing THEOS satellite imagery – A remote sensing and GIS approach. *Urban Forestry & Urban Greening*.

Takano, T., Nakamura, K., & Watanabe, M. (2002). Urban residential environments and senior citizens' longevity in megacity areas: The importance of walkable green spaces. *Journal of Epidemiology and Community Health*.

Washington, D. (2023, June 26). Urban development. Retrieved from World Bank Group:
<https://www.worldbank.org/en/topic/urbandevelopment/overview>.

Wijewardhana, A. M. C., & Senevirathna, E. M. T. K. (2021). Development

of urban green spaces for achieving ecological and social benefits of urban areas in Sri Lanka. *Social Sciences and Humanities*.

Zhang, B., Xie, G., Xia, B., & Zhang, C. (2012). The effects of public green spaces on residential property value in Beijing. *Journal of Resources and Ecology*.

TRACK 04
SOCIETY, POLITICS AND MEDIA STUDIES

PLENARY SPEECH

Sri Lanka at a Crossroad: Prospects for ‘System Change’ and Its Limits

Dr. Pradeep Peiris
Head, Department of Political Science and
Public Policy
University of Colombo



The election victory of the National People’s Power (NPP) is widely characterised as a tectonic shift in Sri Lankan politics. The process, outcome, and the democratic repercussions of the election are unparalleled to any other election held since independence. It was an unequivocal consent for change in the country’s political system, the demand forwarded in increasingly unambiguous terms since the 2022 popular uprising (Aragalaya). In this brief essay, I wish not only to recognize but also to celebrate the democratic victories the election has already brought about. More importantly, however, my attempt through this essay is to bring the reader’s attention to the challenges lying on the road to system change and the limits of political reform. The first half of the essay discusses the democratic salience of the two elections. In the second half, to tame unrealistic expectations, I will discuss the challenges ahead in the path to ‘system change’. After decades of frustrations, the country is at a crossroads today. A very promising opportunity has opened for us to change the destiny of the Sri Lankan state. However, it would be a terrible mistake to assume ‘the job is done’ with just one electoral victory, irrespective of its democratic credentials.

Democratic Victories So Far

The two elections, the Presidential and the Parliamentary, are undoubtedly the most peaceful of their kind in the recent electoral history of Sri Lanka. This affirms that the elites as well as average Sri Lankan voters placed their faith in the electoral process as the means through which interest groups contest for state power.

For the first time since independence, ethno-nationalism played almost no role in shaping the electoral outcome. The way democracy has been operationalised in Sri Lanka so far has seen a practice where voters vote as ethnos rather than demos. As De Votta argued in his ‘ethnic outbidding’ thesis, Sri Lankan political elites, among the majority as well as minority communities, exploited ethnicity for their electoral gains at the cost of harmony. Since independence, the main parties who formed governments won elections either by supporting

Sinhala Buddhist nationalism or by denouncing it for political expediency. If I may provide a recent example, Gotabaya Rajapaksa, a former Secretary of Defense, contested the 2019 Presidential Election and won by campaigning explicitly on a Sinhala Buddhist Nationalist platform. In 2015, the Sirisena-Wickremesinghe coalition won both Presidential and Parliamentary elections by explicitly appealing to ethnic minority votes. However, the NPP maintained neutrality – not subscribing to any nationalist claims by either the Sinhalese or Tamils – on ethnicity and won support across the country. The NPP obtained three out of six seats in Jaffna and two out of six in Vanni. More than the number of seats, the NPP's ability to win the trust of Tamil communities who suffered for decades under Sinhalese political leadership is unprecedented. No political party in the South has ever enjoyed majority support in the North and East over the past 70+ years. Therefore, transcending the ethno-nationalist electoral rationale is one of the greatest achievements of the parliamentary election in 2024.

The parliamentary election outcome seems to suggest that the NPP's election campaign has thwarted the decades-old political culture of patronage politics. It is too early to conclude whether this defeat is permanent or ephemeral. Since the introduction of the universal franchise in 1931, one of the most effective and dominant strategies of electoral mobilisation has been patronage. In patronage politics, politicians distribute various material goods and benefits to the electorate and voters reciprocate by granting their votes. Although the practice of patronage politics is far more nuanced and sophisticated than a simple transaction, a majority of politicians capitalise on networks to amass votes. This practice over many decades has transformed Sri Lankan democracy into what may be called 'patronage democracy'. In patronage democracies, citizens expect from their political representatives particularised benefits instead of policies. Hence, the electability of a particular politician depends on their capacity to distribute patronage goods and not how well they function as legislators. Like in many other countries in South Asia, Sri Lankan politics also suffers from a lack of accountability, corruption, and misgovernance. One of the main slogans of protestors during the 2022 popular uprising (Aragalaya) was 'system change' or in other words, transforming current patronage politics to democratic politics based on 'rule of law' and 'good governance'.

The 2024 electoral outcome confirms the unwavering trust that Sri Lankans have placed in democracy as well as the resilience of the latter to prevail in the midst of repeated authoritarian assaults. Furthermore, people gave a clear message to ruling elites that they desire decent politics, free from the corrupt political culture founded on cheap racist inducements and particularised material benefits, and they are ready to unseat those who do not heed their demands. Not only have people voted for the NPP, but they also have given

them a super majority – 159 seats in Parliament - to continue with the ‘system change’ that is promised.

Path to Consolidate the Democratic Victories

Like any other democratic regime, this government will have to work towards sustaining the popular legitimacy they enjoyed at the election. I am sure the seniors of the new government understand that they would come under scrutiny more meticulously as a ruling party than when they were in the opposition, and perhaps more than any of their predecessors. Therefore, the number one priority for this new regime would be to avoid situations that would undermine their current popularity. In that sense, irrespective of the nature of economic reforms, sustaining the current economic stability should be a top priority. This popularity can be further augmented if the government manages to prosecute those who are responsible for the 2022 economic crisis, Easter Sunday attacks, and various large-scale corruption scandals, among other things.

However, in order to evoke a substantive transformation in Sri Lankan political culture the new government, as it promised in its election manifesto, should produce a new constitution that will redefine the state-society relationship in Sri Lanka. Instead of piecemeal proposals of conservative political elites, such as abolishing the Executive Presidency and so on, the new government should venture into forging a new social contract with radical democratic features. The Constitution should strengthen the role of citizens in governance, and the process through which such a constitution is drafted and adopted must also ensure maximum citizen participation. The new government should explore out-of-the-box solutions to deepen democracy in the country.

However, the country’s political history suggests that the policies and ethics advocated while in the opposition are hardly practiced when politicians come into power. In 1994, Chandrika Bandaranaike Kumaratunga and in 2015 Sirisena-Wickremesinghe proved that politicians do not walk the talk when in power. In addition, the massive parliamentary majority received by this government is alarming. Although it allows the NPP to implement important yet unpopular policies, its unchecked powers could encourage an authoritarian political climate. The NPP may be able to implement policies not because they manage to convince people of their merits but simply because it has the power to do so. This goes against the spirit of social contract. Unlike when they were in the opposition, parties and politicians face severe criticism as well as many disruptive forces while in power. Therefore, when political dissent, criticism and resistance begin to grow, the unchecked super majority could become repressive. This is not to undermine the NPP’s success, but to alert the citizenry to the consequences of a super majority for democratic governance. Early

theorists of democracy advocated the importance of checks and balances as they believed power could corrupt. Therefore, while celebrating the new opportunity to rewrite the country's democratic future, I would like to also introduce a note of caution about the challenges in the path to 'system change'.

18 December 2024

EXPLORING THE IMPACT OF ADAPTIVE DANCE TECHNIQUES ON THE WELL-BEING AND SOCIAL INCLUSION OF INDIVIDUALS WITH SPECIAL NEEDS

V.M. Fernando^{1*}

¹*Department of Sociology, Faculty of Arts, University of Colombo*

Abstract

This qualitative study explores how adaptive dance techniques used by Sri Lankan dance mentors impact the well-being and social inclusion of individuals with special needs, with a focus on those with Down syndrome. Specific objectives include examining the portrayal of adaptive dance in Sri Lanka, investigating techniques that enhance the well-being of individuals with Down syndrome, and assessing the role of adaptive dance classes in promoting social inclusion. Conducted at a renowned dance foundation for special needs in Colombo, the study involved twenty participants selected through purposive sampling. Data were gathered through in-depth interviews and participant observations. The research highlights the benefits of adaptive dance techniques such as imitation, mirroring, and collaborative dancing in enhancing physical, emotional, and social well-being. It emphasises the importance of emotional support, familial involvement, and the incorporation of gestures for cognitive development. Grounded in theoretical frameworks—phenomenology and symbolic interactionism—the study advocates for leveraging strengths rather than challenges through the Strengths Perspective in Social Work. Adaptive dance provides a platform for self-expression, creativity, and connection, promoting holistic well-being and fostering social inclusion and empowerment for individuals with special needs.

Keywords: *Adaptive Dance, Empowerment, Social Inclusion, Special Needs, Well-Being*

*Corresponding author: Tel.: +94 (76) 793 9693; Email: varuni@soc.cmb.ac.lk
<https://orcid.org/0009-0002-0517-0052>

Introduction

Adaptive dance, defined by the Dance Council of North Texas (2008), is a programme tailored to individuals with diverse abilities, promoting inclusivity and participation. Swinford (2012) highlights its benefits for people with Down syndrome, such as social, physical, and intellectual engagement. Despite behavioural issues and lower participation in physical activities, therapeutic dance offers inclusive experiences and significant benefits (Rastegari, 2016; National Centre for Dance Therapy, 2020). With the limited local literature, this research delves into how Sri Lankan dance mentors utilise adaptive dance techniques to enhance the well-being and social inclusion of individuals with special needs.

Research Aim and Objectives

Main Objective

To explore the impact of adaptive dance techniques used by Sri Lankan dance mentors for individuals with special needs, with a focus on those with Down syndrome, in Sri Lanka.

Objectives

1. To examine how the adaptive dance is practised in Sri Lanka.
2. To investigate the techniques employed by dance mentors to enhance the well-being of individuals with Down syndrome.
3. To explore how an adaptive dance class can serve as an institution that promotes social inclusion.

Material and Methods

The research was conducted at a leading special needs foundation in Colombo, which has achieved recognition under Parliamentary Act, No. 39 of 2009. This foundation is renowned for providing free special education nationwide in Sri Lanka. Twenty participants, including dance mentors, students, parents, and volunteers, were purposefully selected to gather qualitative data through in-depth interviews and participant observations. Ethical guideline ensured informed consent, privacy protection, and data confidentiality. Thematic analysis was employed to identify patterns and themes in the data related to the impact of adaptive dance techniques. The analysis focused on interpreting participants' lived experiences and drawing connections between the data and the study's theoretical frameworks. Several study limitations have been highlighted: the mentors are not trained in therapeutic dance, limiting the ability to assess therapeutic outcomes; the small sample size and focus on one

foundation make the findings non-generalisable; and self-reported data of parents and mentors may introduce bias.

Results and Discussion

Regarding cognitive and social development, Mead (1972) emphasises that the mind, self, and society are interconnected through social interaction. Children with Down syndrome are born with developmental delays, which affect their ability to learn conventional gestures and communicate meaningfully (Boston Children's Hospital, 2022). Hence, there is a need for effective activities that support cognitive and social growth, such as adaptive dance. Adaptive dance focuses on individual capacities rather than a one-size-fits-all approach. This aligns with Alfred Schutz's phenomenological perspective, which asserts that individuals experience the world subjectively, and each person's understanding of reality is influenced by their unique life experiences (Appelrouth & Edles, 2007). This subjectivity is especially relevant in aesthetic activities like dance, where each student interprets dance steps and styles differently. This variation is influenced by Schutz's concept of "biographically articulated" stocks of knowledge, where even individuals with similar backgrounds, such as identical twins, have distinct experiences and interpretations (Appelrouth & Edles, 2007). Saleebey's Strengths Perspective in Social Work shifts the focus from challenges to leveraging their strengths (Saleebey, 1996). As mentioned by Larson (1992), "Social well-being is composed of two elements: social adjustment and social support. Social adjustment is a combination of satisfaction with relationships, performance in social roles, and adjustment to one's environment. Social support comprises the number of contacts in one's social network and satisfaction with those contacts." These theoretical approaches provided the foundation for understanding the key techniques utilised by the dance mentors to enhance the well-being of the students.

Dance Techniques for Adaptive Dance

Technique 1: Imitation - According to dance mentors, many students with special needs excel in this skill. By emulating the movements of peers, students develop freestyle movements and learn conventional gestures effectively. Mentors leverage imitation to refine students' dance abilities before providing personalised instruction, making it a preferred teaching method.

Technique 2: Mirroring - The mentors introduced mirrors into dance practice to aid students in mirroring movements and addressing coordination challenges. Mirrors allowed students to synchronise movements, follow

directions, and grasp performance nuances by observing the mentor's movements from the same perspective. This technique fosters self-awareness, aligning with Cooley's (1902) "looking-glass self" concept, particularly benefiting individuals with special needs like Down syndrome. By seeing themselves in the mirror, students develop a sense of self and understand how they are perceived by others, guided by mentors toward self-awareness in an inclusive environment.

Technique 3: Learning from Special Needs Students - The dance mentors embrace a reciprocal learning approach in adaptive dance, valuing the insights and experiences of their students. Instead of imposing predetermined ideas, mentors encourage students to express themselves through dance, drawing strength from music. This inclusive environment empowers students to share their unique perspectives, fostering a rich learning environment. Guided by the strength's perspective, mentors recognise students as experts in their own experiences, leveraging their strengths to tailor activities to individual needs. Each student's strengths and challenges are considered, with mentors adapting strategies to ensure inclusivity and engagement. By accommodating personal preferences and providing tailored support, mentors create a supportive environment where all students can enjoy dancing with their chosen partners.

Technique 4: Incorporating Students' Subjectivity - The dance mentors prioritise incorporating students' subjectivity into choreographing dance routines, avoiding the imposition of their ideas. This approach is consistently applied to all students, allowing them to express themselves authentically. Some students, with advanced proficiency, integrate their subjectivity into their dancing. For example, students trained in Bharatanatyam hand gestures deliberately incorporate these gestures to align with the song's lyrical content. For instance, recognising that the song mentions "flower," a student utilises the Alapadma mudra to symbolise a flower in their dance movements.

Technique 5: Prioritising Emotional Support - Emotional support is essential for individuals with Down syndrome, who often face exclusion and discrimination, particularly in social settings. In the dance class, mentors provide a nurturing environment, demonstrating a strong emotional attachment to students and fostering a positive atmosphere. Volunteers' affection further enhances students' positive mindset during classes. Additionally, familial support is crucial for enhancing social skills, with students benefiting from nurturing childhoods and exposure to normalisation experiences through siblings, contributing to their social development.

Technique 6: Ignoring Negative Behaviours - The dance mentors

strategically address aggressive or hyperactive behaviours in students by employing a policy of selective attention. Rather than coercing hyperactive children into dance classes, they allow them to choose to participate voluntarily. Once in class, these students are given space to wait for opportunities to engage in dancing spontaneously. Instead of ignoring them entirely, mentors provide attention and support when students decide to join in, facilitating their participation. Recognising that hyperactive behaviours often stem from a desire for attention, mentors refrain from reinforcing negative behaviours by withholding attention initially. However, once students voluntarily join ongoing sessions, mentors actively engage with them, effectively managing and redirecting their energy towards constructive activities.

Technique 7: Incorporating Music - According to Reinders, Bryden, and Fletcher (2015), music acts as a stimulus for individuals with Down syndrome to dance and remember which movements are needed to perform with each song, which is crucial in enhancing memory difficulties that many individuals with Down syndrome experience. Individuals with Down syndrome exhibit positive responses to music and express themselves through body movements, showcasing these abilities as their primary strengths. From the Strengths Perspective, music acts as a "material strength," energising students and evoking happiness while providing a medium for emotional expression. Dancing to music they enjoy may also contribute to their "sentimental strengths," fostering emotional connection and expression. Dance and music encourage personal effort, providing opportunities to overcome limitations imposed by disabilities and fostering a sense of achievement (Sooful, Surujlal & Dhurup, 2010). Furthermore, the motivation to reach one's potential uplifts the human spirit and enhances socialisation among individuals with intellectual disabilities, regardless of their ability level.

Technique 8: Collaborative Dancing with Volunteers Without Special Needs - The close relationships between students' families and mentors have led to collaboration between students with special needs and volunteers without special needs. Initially serving as backup dancers, volunteers evolved into supportive partners, ensuring synchronised performances and aiding memory. Over time, they became equal dance partners, enhancing group inclusivity. Volunteers provide emotional and social support, helping to challenge stereotypes and raise public awareness. Their peer support, facilitated by their age range of 18–30 years, fosters communication and cooperative skills within the group. Mentors utilise social media to showcase inclusive dance sessions, promoting awareness and inclusivity. Volunteers

appreciate the opportunity to dance alongside individuals with special needs, recognising the community's embrace of inclusivity and empowerment during joint activities. These collaborative efforts demonstrate greater empowerment and integration of students than activities conducted separately.

Technique 9: Respecting Self-creativity - Through intersubjectivity, dance mentors share their lifeworld with students' subjectively perceived lifeworlds, using elements of students' experiences to fuel creativity in choreography. For example, during quarantine, students were encouraged to create their dance steps to a given song, which mentors and volunteers then merged into a collaborative video shared on social media. This approach prioritises freedom and allows students to express their subjectivity without constraint, fostering creativity in adaptive dance classes.

Technique 10: Using Hasta Mudras - Abraham (2001) highlights Mead's perspective on language as a social act necessary for rational cooperation among individuals. Language originates from gestures, which are considered fundamental social acts. Gestures, whether preparatory or social, hold social significance and facilitate meaningful interaction. In Bharatanatyam, gestures are agreed upon by scholars within the dance tradition, serving as symbolic interactions. Similarly, everyday gestures used by dance mentors convey social meaning within the Sri Lankan cultural context. Through adaptive dance, students learn these social gestures, enabling them to cooperate with peer groups and society at large rationally.

Conclusion and Recommendations

This study has illuminated the multifaceted potential of adaptive dance as a transformative tool for enhancing the well-being and social inclusion of individuals with special needs, particularly those with Down syndrome. By exploring the techniques employed by Sri Lankan dance mentors, several key insights have emerged. The study underscores the importance of nurturing a sense of self to develop social skills among individuals with Down syndrome, addressing the issue of social exclusion. Adaptive dance serves as a platform for fostering inclusivity and participation, aligning with the principles of the Strengths Perspective in Social Work. Through techniques like imitation, mirroring, and collaborative dancing, mentors create a supportive environment for students to freely express themselves and cultivate their sense of identity. Moreover, emotional support and familial involvement are highlighted as critical factors in nurturing social skills among individuals with special needs. The close relationships between mentors, volunteers, and students foster a sense of belonging and empowerment within the dance community.

Additionally, the incorporation of music and gestures enhances cognitive abilities and supports learning and memory retention. Dance becomes a medium for individuals with Down syndrome to express themselves creatively and forge deeper connections with their peers. Overall, adaptive dance transcends traditional notions of physical activity by addressing the holistic needs of individuals with special needs and promoting social inclusion, empowerment, and overall well-being.

Looking ahead, further research and advocacy efforts are crucial for promoting the integration of adaptive dance into mainstream educational and therapeutic settings, ensuring equitable access to its benefits for all individuals. Currently, dance mentors working with individuals with special needs rely on experience-based interventions rather than therapeutic knowledge, highlighting the need for additional training and expertise in therapeutic practices. To enhance the effectiveness of adaptive dance programmes, it is essential to establish a licensed monitoring system for these institutions, allowing for regular evaluation of their impact and efficacy. Additionally, fostering interdisciplinary collaboration among social workers, dancers, and dance therapists will be vital for advancing this field. Future research should also focus on culturally specific approaches to adaptive dance, facilitating knowledge exchange between national and international adaptive dance styles. This will not only enrich the practice but also contribute to a broader understanding of how adaptive dance can be effectively implemented across diverse contexts.

References

Abraham, M. F. (2001). *Symbolic interactionism*. In *Modern sociological theory: An introduction* (6th ed., pp. 209–242). Oxford University Press.

Appelrouth, S., & Edles, L. D. (2008). *Classical and contemporary sociological theory*. Pine Forge Press.

Boston Children's Hospital. (2022). *Down syndrome*. Retrieved February 13, 2024, from <https://www.childrenshospital.org/conditions-and-treatments/conditions/d/down-syndrome#:~:text=Down%20syndrome%20is%20a%20genetic,risk%20for%20certain%20medical%20issues>

Dance Council of North Texas. (2022). *Adaptive dance - Dance Council of North Texas*. Retrieved January 19, 2024, from https://dancecouncil.clubexpress.com/content.aspx?page_id=22&club_id=752324&module_id=33014#:~:text=Adaptive%20dance%20is%20the%20t

erm,which%20all%20abilities%20can%20participate

Larson, J. S. (1991). The measurement of social well-being. *Social Indicators Research*, 28(3), 285–296. <https://doi.org/10.1007/bf01079022>

Mead, G. H. (1972). *Mind, self, and society from the standpoint of a social behaviourist* (C. W. Morris, Ed.; 1st ed.). University of Chicago Press. <https://lk1lib.org/book/914145/cba3d5>

Rastegari, J. A. A. I. (2016, January 8). Dance that adapts to disabilities. *Harvard Gazette*. Retrieved January 19, 2024, from <https://news.harvard.edu/gazette/story/2016/01/dance-that-adapts-to-disabilities/>

Reinders, N., Bryden, P. J., & Fletcher, P. C. (2015). Dancing with Down syndrome: A phenomenological case study. *Research in Dance Education*, 16(3), 291–307. <http://dx.doi.org/10.1080/14647893.2015.1036018>

Saleebey, D. (1996). The strengths perspective in social work practice: Extensions and cautions. *Social Work*, 41(3), 296–305. <https://doi.org/10.1093/sw/41.3.296>

Sooful, A., Surujlal, J., & Dhurup, M. (2010). Dance and music as mediums for the social integration of children with intellectual disabilities into mainstream society. *African Journal for Physical, Health Education, Recreation and Dance*, 16(4), 681–697. https://www.researchgate.net/publication/272458676_Dance_and_music_as_mediums_for_the_social_integration_of_children_with_intellectual_disabilities_into_mainstream_society

Swinford, R. R. (2012). *Adapted dance - Connecting mind, body and soul* [PhD thesis, Indiana University]. IUPUI ScholarWorks. <http://dx.doi.org/10.7912/C2/1388>

A PSYCHOLOGICAL STUDY OF THE IMPACT OF SMARTPHONE ADDICTION ON THE MENTAL HEALTH AND WELL-BEING OF UNIVERSITY STUDENTS

K.G. Iranga Dilshan^{1*}, D.M.C. Malshika Dahanaka²

^{1,2}*Department of Philosophy and Psychology, University of Sri Jayewardenepura.*

Abstract

In today's technologically advanced and modernised world, smartphone addiction is a fundamental problem that has emerged recently and various problematic situations are heard and seen today. The primary purpose of the research is to psychologically study how smartphone addiction affects mental health and well-being among university students. Accordingly, to achieve the research objective, a sample of eighty university students were selected randomly, from the Faculty of Humanities and Social Sciences at the University of Sri Jayewardenepura. Both quantitative and qualitative research methodologies were used to collect data for this research. Accordingly, quantitative data were collected through interviews and online questionnaires and were analysed using Excel computer software. Qualitative data were gathered through observation, interviews, magazines, and newspapers analysed according to the thematic analysis method. Excessive time spent on social media is associated with increased anxiety, depression, and loneliness. It also negatively impacts real-world social connections.

Keywords: *Mental Health, Smartphone Addiction, Social Media, University, Well-Being*

**Corresponding author: Tel.: +94769630604; Email: iranga18dilshan@gmail.com
<https://orcid.org/0009-0001-6295-5588>*

Introduction

With today's technological advancements, man has been able to achieve many amazing concepts in the real-world that were only limited to the fictional stories of childhood. In the history of human evolution, since the discovery of fire, the discoveries that have been made with technological advancements are unique to human existence. The invention of digital technology has revolutionised the field of information technology. In today's digital age, technology plays an essential role in the lives of university students as a means of facilitating communication, learning, and entertainment. However, the negative effects of excessive technology use on mental health and well-being have received much attention.

The main research objective to be covered by this study is the psychological study of the impact of smartphone addiction on the mental health and well-being of college students. Accordingly, in terms of modernised educational methods, the main research focuses on the relationship between the usage of smartphones and the psychological well-being of students.

The other objectives of this study are to determine how much time students spend relating to smartphones and the extent of technological usage for academic and non-academic activities. Apart from that, the study investigates the prevalence of stress caused by smartphone addiction.

Smartphone addiction can be mentioned as a potential dilemma that can suppress the psychological well-being of the future labor force of a third-world developing country. As a developing third-world country, Sri Lanka faces a significant dilemma with the increasing addiction to smartphones among its educated and intelligent student population. Mental health and well-being, essential for individual survival, are increasingly at risk due to this trend. Many scholars emphasise the urgent need for psychological investigations into how smartphone addiction impacts mental health and overall well-being.

Material and Methods

Faculty of Humanities and Social Sciences of the University of Sri Jayewardenepura was chosen as the study area to conduct a psychological study on how technology addiction affects mental health and well-being among university students.

A sample of eighty university students was selected for this study, from the Faculty of Humanities and Social Sciences. The sample has been selected through random sampling. Employing random sampling ensured the representativeness of the sample and minimised potential biases.

Data collection for this research was done through three main methods. Primary data, secondary data (journals, papers, newspapers, etc.), and tertiary sources (internet) were used. Interviews and questionnaires have been deployed on the selected sample.

The Perceived Stress Scale (PSS) and the Generalised Anxiety Disorder 7-item scale (GAD-7) are widely used tools for measuring stress and anxiety levels.

1. Perceived Stress Scale (PSS): This scale assesses how unpredictable, uncontrollable, and overloaded respondents perceive their life experiences. It typically consists of 10 or 14 items that ask individuals to reflect on their feelings and thoughts over the past month. Higher scores indicate greater perceived stress.
2. Generalised Anxiety Disorder 7-item scale (GAD-7): This tool screens for generalised anxiety disorder and assesses the severity of anxiety symptoms. It includes 7 items that inquire about the frequency of anxiety-related experiences over the past two weeks. Scores range from 0 to 21, with higher scores indicating more severe anxiety.

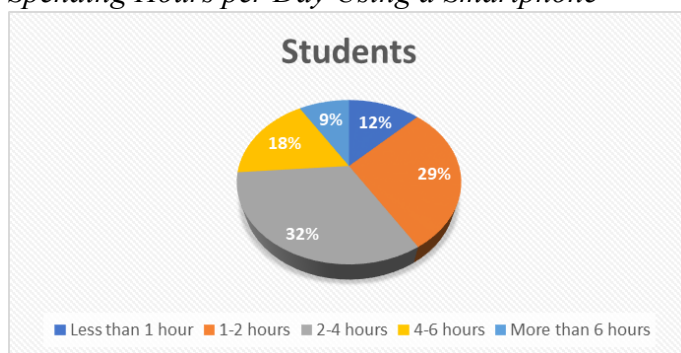
Together, these tools provide valuable insights into an individual's mental health, helping to identify areas that may need attention or intervention.

The Quantitatively obtained data were analysed using Excel computer software, and qualitatively obtained data were analysed according to the thematic analysis method.

Results and Discussion

The questionnaire for this study was created in several parts. It examines how smartphone is used, examines the gravity of addiction, and the impact on psychological well-being. Additionally, the analysis of the information gathered through interviews shows the measures individuals take to reduce smartphone use and its impact on their interpersonal relationships.

Figure 1:
Spending Hours per Day Using a Smartphone



The information revealed by this research can be stated as follows. Data from the research reports that another 58% use their mobile phone for more than 4 hours a day for the purposes of social media, web browsing and playing games (Figure 1).

A significant portion of daily smartphone usage is dedicated to activities such as texting, social media, and web browsing, and gaming. Notably, 60% of participants reported using social media platforms daily, highlighting a remarkably high engagement with these platforms. Additionally, 62.5% of respondents expressed feelings of restlessness or anger when unable to use their smartphones or access the Internet. However, 63.8% indicated that their use of technology does not interfere with fulfilling other responsibilities or activities, suggesting a degree of balance in their digital habits.

The study revealed several key findings regarding smartphone usage and its impact on students. While 65% of participants reported getting adequate sleep, 60% indicated that technology use affects their ability to focus on tasks. Additionally, 60% expressed concerns raised by friends or family about their smartphone habits, and 52.5% showed signs of mental stress. Despite this, 86.5% reported not feeling lonely or socially isolated, as they use social media to stay connected with friends and relatives. To cope with stress or negative emotions, participants engaged in activities such as meditation, listening to music, playing sports, watching movies, or YouTube videos. Notably, 54% of respondents admitted unsuccessful attempts to reduce smartphone or internet use, often facing stress due to excessive screen time. These findings underscore the complex relationship between smartphone use, mental health, and well-being.

Conclusion and Recommendations

The research highlights the widespread addiction to smartphones among

university students, revealing its impact on mental health and well-being. Excessive smartphone use is linked to stress, anxiety, depression, and difficulties maintaining attention, with 60% of students spending over four hours daily on platforms like Facebook, WhatsApp, and YouTube. This behavior has diminished face-to-face interpersonal communication, substituting it with digital interactions. While students adopt methods to cope with stress, such as engaging in alternative activities, they often experience frustration or anger when unable to access the Internet. Despite these challenges, the study found that smartphone usage does not significantly interfere with their academic responsibilities. The findings emphasise the importance of cultivating mindful smartphone habits, fostering positive interpersonal relationships, and reducing excessive internet use to promote mental health and a balanced lifestyle.

References

- Abuhamdah, S. M. A., & Naser, A. Y. (2023). Smartphone addiction and its mental health risks among university students in Jordan. *BMC Psychiatry*, 23. <https://doi.org/10.1186/s12888-023-05322-6>
- Griffiths, M. (2019). *The psychology of social networking: Personal experience in online communities*. Routledge.
- Lebni, J. Y., Toghroli, R., Abbas, J., NeJhaddadgar, N., Salahshoor, M. R., & Mansourian, M. (2020). A study of internet addiction and its effects on mental health: A study based on Iranian university students. *Journal of Education and Health Promotion*, 9. https://doi.org/10.4103/jehp.jehp_148_20
- Sarhan, A. L. (2024). The relationship of smartphone addiction with depression, anxiety, and stress among medical students. *SAGE Open Medicine*, 12. <https://doi.org/10.1177/20503121241227367>
- Ünal, A. T. (2020). A comparative study of social media addiction among Turkish and Korean university students. *Journal of Economy, Culture and Society*, 62, 307–322. <https://doi.org/10.26650/JECS2020-0064>
- Yilmaz, F. G. K., Avci, U., & Yilmaz, R. (2022). The role of loneliness and aggression on smartphone addiction among university students. *Current Psychology*, 42. <https://doi.org/10.1007/s12144-022-03018-w>

RESETTLEMENT AND SOCIAL FRAGMENTATION: WITH SPECIAL REFERENCE TO CONFLICT OF RESETTLED VEDDA COMMUNITY IN SRI LANKA

P. Epa^{1*}, S. Gunasekara² and Slimaa Ali

¹*Department of Sociology, Hohai University, 8 Focheng West Road, Nanjing 2111000,
People's Republic of China*

²*Department of Sociology, University of Ruhuna, Matara, Sri Lanka*

Abstract

This research paper aims to identify and examine the conflicts experienced by the Vedda community after resettlement. Conflict is a significant negative impact faced by resettled people and has become a pressing issue that requires attention. The objective of this study is to identify the main types of conflict that arose because of resettlement. The study utilised an exploratory qualitative research approach to provide detailed explanations of the research problem from a subjective viewpoint. Respondents were selected from a resettlement site in Hennanigala South within the Mahaweli "C" Zone. A total of thirty-five (35) sample respondents were selected using stratified sampling and purposive methods. The qualitative study revealed that the community faced five main types of conflicts: human-wildlife, resettlement and officials, identity, generational, and intra-community conflicts, resulting in 11 minor conflict types under each main category. These conflicts have led to serious livelihood issues, causing deviations from main livelihoods and outbound migration. The findings underscore the need for an effective conflict resolution mechanism. It is recommended to develop a conflict resolution mechanism that integrates Indigenous knowledge to address these issues.

Keywords: *Conflicts, Development, Livelihood, Migration, Resettlement*

**Corresponding author: Tel.: +94 (71) 5157940; Email: handunmali@gmail.com;
<https://orcid.org/0000-0003-0955-5371>*

Introduction

Conflicts are an unavoidable aspect of human interactions (McKenna, 2016). These conflicts can manifest in various forms, including interpersonal conflicts, group conflicts, or societal conflicts. Resolving conflicts effectively requires open communication, active listening, empathy, and a willingness to compromise. By addressing conflicts constructively and seeking common ground, individuals and groups can work towards peaceful resolutions and foster positive relationships. Effective conflict resolution skills are essential for promoting harmony, understanding, and cooperation in diverse social settings (Humphreys, 2005). This phenomenon often leads to social, economic, and environmental challenges for affected communities. It is crucial to address these issues through comprehensive planning, stakeholder engagement, and the implementation of sustainable development practices to mitigate the negative impacts of displacement and ensure the well-being of those affected (Emmanuel et al., 2020).

Displacement and resettlement frequently occur due to power imbalances among various stakeholders, including international financiers, national governments, corporate developers, and affected populations (Mteki et al., 2017). Large-scale development projects, especially those involving dams and industries, have a significant impact on tribal groups and Indigenous communities, resulting in socio-economic consequences and injustices (Vander & Vancley, 2017). Existing studies have extensively examined the impact of conflicts. First, there have been limited studies on specific dimensions and types of conflicts in resettlement areas. Most studies have focused on discussing the effects of conflicts. Second, there has been insufficient analysis of the dimensions of conflict and its impact on communities. Existing studies have extensively examined the impact of conflicts. However, there is a lack of research focusing on specific dimensions and types of conflicts in resettlement areas. Most studies have primarily discussed the effects of conflicts without delving into the various dimensions and impacts on communities. Additionally, the majority of existing studies have concentrated on intrastate or interstate conflicts rather than community conflicts. Furthermore, there is a scarcity of studies that specifically address conflicts in resettled Indigenous communities. This study aims to identify conflicts within the Vedda community residing in Hennanigala South within the Mahaweli "C" Zone. The research problem revolves around understanding the dimensions of conflict in this resettlement area. The primary objective of this research is to identify the main types of conflict that have emerged because of resettlement due to the implementation of a modern development project.

By exploring these aspects, the research aims to provide valuable insights that can guide policies and interventions aimed at mitigating conflicts and fostering peaceful coexistence among Indigenous communities and other stakeholders in resettlement areas.

Material and Methods

The current study employed an exploratory qualitative research approach to provide detailed explanations of the research problem from a subjective perspective. Respondents were selected from a resettlement site in Hennanigala South within the Mahaweli "C" Zone. A total of thirty-five (35) sample respondents were selected using stratified sampling. The breakdown of interviewees is shown in Table 1.

Table 1:

Interviewee Breakdown

Women	Men	Age Range	1 st Generation	2 nd Generation	3 rd Generation
13	22	25-75	17	10	8

Source: Field Research – 2023

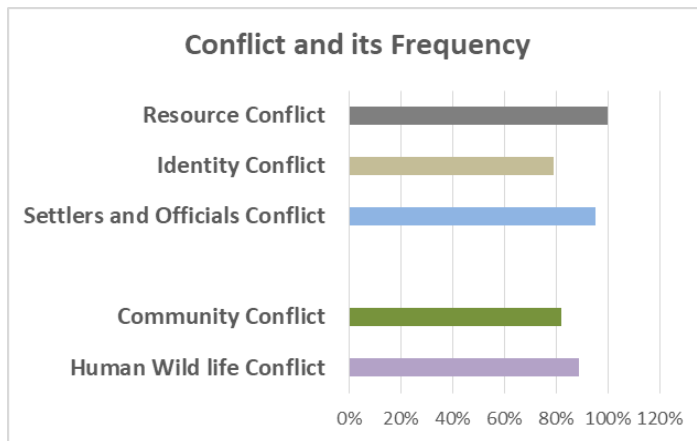
The respondents consisted of resettlers, including first, second, and third-generation members. Two government officials (a forest officer and a Mahaweli unit manager) and three leaders from Community-Based Associations (CBA) (Chairman of the Farmers Association, Water Association, and Fisheries Association) were selected through purposive sampling as key informant interviewees. They were chosen based on their experience and ability to provide insightful information on the region and conflicts in the resettlement area. The respondents represented a diverse range of ages, generations, and employment backgrounds, offering a comprehensive perspective on the issues being investigated. Semi-structured interviews were conducted with all participants using three interview guides tailored for settlers, government officials, and CBA officers. The guides contained open-ended questions to elicit detailed responses. Settlers and CBA officers were interviewed to explore their conflict experiences and identify contributing variables, while government officials were interviewed to understand ongoing conflicts and key factors from their perspective. The interviews provided insights from three distinct viewpoints: settlers, community leaders, and public sector officials. The perspectives were analysed thematically to identify

common themes and patterns. Ultimately, a thematic analysis was conducted to synthesise the findings.

Results and Discussion

Figure 1:

Types of Conflict and Its Frequency



Source: Field Research 2023

Figure 1 illustrates the main types of conflicts in the area and their frequency. The study identified five main types of conflict in the resettlement area, primarily related to indigenous communities. Resource conflict accounted for 100% of the conflicts, followed closely by conflicts between settlers and officials at 96%. Human-wildlife conflict was the third most common type at 89%, followed by community conflict at 82%. Identity conflict was the least frequent type of conflict in the area. In addition to these main conflicts, minor conflicts within these categories were also identified. Table 2 below shows the frequency of these minor conflicts within each main category.

Table 2:
Minor Conflicts and Its Frequencies

Types of Major Conflict	Types of Minor Conflicts	Number of responses	Frequency of Conflict (%)
Human-Wildlife Conflict	Human Elephant Conflict	35	100
	Peacock Conflict	35	100
	Wild Boar Conflict	23	66
Community Conflict	Fisheries and non-Fisheries Community	22	63
	Community in Water Association and conflict among community	35	100
Settlers and Officials Conflict	Settlers and Mahaweli Officers	33	94
	Settlers and Forest Officers	34	97
Identity Conflict	Indigenous and Majority local Community	22	63
	Generational conflicts among same community	33	94
Natural Resources Conflict	Water Related Conflict	35	100
	Land and Forest Encroachment	35	100

Source: Field Research - 2023

The research identified 11 types of minor conflicts in the area, with human-wildlife conflict being the main threat to resettlement. This conflict has not only endangered lives but also disrupted the livelihoods of the settlers. The most prominent wildlife conflicts involve wild elephants and peacocks. Additionally, conflicts arise between fisheries association members and other fisheries communities over resources in Hennanigala Lake, and between water association members and other communities over purified water. Conflict also occurs among indigenous communities, Mahaweli officers, and forest officers due to differing rules, regulations, and policies on resource allocation. Generational conflict arises from the tension between preserving cultural identity and embracing modern culture. Water and land resource conflicts stem from issues such as resource scarcity, water contamination, and policy-level disputes over resource allocation.

“There are several conflicts within our community. We used to rely on the

forest for our livelihood, but now we have to adapt to a new environment and way of life. Additionally, we have two different administration patterns to navigate, which is a source of concern for us. The younger generation in our community does not always adhere to traditional rules. We face numerous challenges related to our livelihood, such as wildlife destroying our paddy lands at various stages. Moreover, we lack proper water resources for agriculture and daily use. Despite informing the relevant authorities about these issues, they have not taken them into account. These all have caused conflict in the community.”

(The Leader of the Vedda community)

The recurring conflicts in the resettlement area have caused economic impoverishment in the community. These conflicts have negatively impacted the regular operation of income-generating activities, leading to economic and social marginalisation. The Mahaweli Development Project has implemented various social and environmental policies, but they mainly focus on humans, leading to conflicts between humans and animals. There is a disparity between the needs of humans and animals, exacerbating human-wildlife conflicts. Natural resources are primarily allocated for human needs, neglecting wildlife requirements. The conflicts in the settlement are driven by factors such as population growth, agricultural modernisation, illegal encroachment, forest conversion into human habitats, and an imbalance in the human-environment connection. This has resulted in the loss of traditional livelihoods and community migration.

Forced relocation disrupts the traditional ways of life of indigenous communities, leading to social fragmentation, cultural erosion, and loss of identity. Ignoring their attachment to the forest and failing to consider their unique cultural needs has resulted in the breakdown of traditional social structures, causing the community to lose coherence and cultural identity, leading to social fragmentation. The lack of adequate planning and support mechanisms during and after resettlement exacerbates these issues, as indigenous communities are often marginalised in new environments.

Conclusion and Recommendations

Resettlement initiatives should prioritise maintaining the social fabric of the communities and ensure that their rights to land, culture, and identity are respected. Long-term success in resettlement programmes hinges on careful planning that balances development objectives with the social and cultural well-being of indigenous populations. Crucial decisions based on policies are necessary to resolve conflicts. Careful planning, community engagement, and

policy enforcement are essential to resolve conflicts in resettlement areas. Consideration of the cultural and historical background of indigenous people is crucial for equitable solutions. Addressing underlying grievances and root causes of greed is key to managing and resolving natural resource conflicts in resettlement areas.

References

- Emmanuel, A., Amankwah, A., Edward, A. E., & Atta-Darkwa, T. (2020). Socioeconomic impact of development projects on the livelihood of farmers: A case study of the Bui Dam Hydroelectric Project. *Journal of Geography, Environment and Earth Science International*, 24(1), 34–44. <https://doi.org/10.9734/jgeesi/2020/v24i130192>
- Humphreys, M. (2005). Natural resources, conflict, and conflict resolution: Uncovering the mechanisms. *Journal of Conflict Resolution*, 49(4), 508–537. <https://doi.org/10.1177/0022002705277545>
- McKenna, K. (2016). *Corporate social responsibility and natural resource conflict*. (Issue April). <https://doi.org/10.4324/9781315768755>
- Mteki, N., Murayama, T., & Nishikizawa, S. (2017). Social impacts induced by a development project in Tanzania: A case of airport expansion. *Impact Assessment and Project Appraisal*, 35(4), 272–283. <https://doi.org/10.1080/14615517.2017.1322806>
- Van der Ploeg, L., & Vanclay, F. (2017). A human rights-based approach to project-induced displacement and resettlement. *Impact Assessment and Project Appraisal*, 35(1), 34–52. <https://doi.org/10.1080/14615517.2016.1271538>

REEVALUATING SECULARISATION: UNDERSTANDING THE ROLE OF RELIGION IN NAWAGAMUWA PATTINI DEVĀLAYA

C.J. Wijayapura^{1*}

¹ *Department of Social Sciences, Sabaragamuwa University of Sri Lanka*

Abstract

This study investigates the persistence of religion at Nawagamuwa Pattini Devālaya, a Buddhist temple in Sri Lanka dedicated to the goddess Pattini, to evaluate the secularisation theory. Through participant observation and interviews, the research revealed significant participation in rituals, celebrations, and community activities, illustrating how their religion shapes devotees' daily lives and societal norms. The findings highlight Nawagamuwa Pattini Devālaya as a vital religious centre, where active engagement and high levels of ritual participation challenge predictions of declining religious influence associated with modernisation. The temple's integration of faith with modern healthcare practices, such as the coexistence of traditional worship and medical treatment, alongside its involvement in community initiatives, underscores the complexity of religious dynamics in contemporary non-Western societies. This calls for a nuanced understanding of how religion adapts and retains significance in the face of ongoing social change and modernisation.

Keywords: *Modernisation, Nawagamuwa, Pattini, Religion, Secularisation*

**Corresponding author: Tel.: +94 (75) 323 3929; Email: chandanawijayapura@gmail.com; <https://orcid.org/0009-0005-5822-6656>*

Introduction

A well-known paradigm in the sociology of religion is secularisation theory, which holds that modernity has caused religion's social significance to decline. According to this theory, societies tend to become less religious as they become more modern (Owens, 2015). However, this hypothesis has been increasingly questioned, particularly in contexts where religion remains significant. This study aims to reevaluate secularisation hypotheses by examining the role of religion within the context of Nawagamuwa Pattini Devālaya. The research focuses on understanding the temple's religious practices, factors influencing engagement, and how these challenges support broader trends in secularisation theory. Nawagamuwa Pattini Devālaya is frequented by devotees who deeply engage in religious rituals and ceremonies, shaping social attitudes, individual values, and community involvement (Embuldeniya, 2018). The results will support theoretical frameworks on secularisation by highlighting the need for models that take into consideration the adaptability and dynamic character of religious practices and institutions. This study sheds light on the nuanced interactions that modern societies have between modernity and religion.

Material and Methods

The purpose of this study is to clarify the significance of religion and to reexamine the secularisation theory. To collect comprehensive data on religious practices and community activities associated with the temple, a qualitative approach is employed. Information about religious ceremonies and the activities of devotees was gathered through participant observation. Over four months, the researcher attended religious ceremonies, festivals, and events to record customs and practices. Semi-structured interviews were carried out with fifteen devotees, comprising key informants and temple leaders. The purpose of these interviews was to obtain information about the devotees' viewpoints on the function of religion, as well as their personal experiences and the temple's significance in their lives. With informed consent, the audio of the interview was recorded. Background information was gathered from historical documents, newspaper stories, and publications about the temple. The information obtained from observation and interviews was supported by this triangulation. Using a purposive sampling technique, regular participants were chosen. The interview data were transcribed and analysed using thematic analysis to identify specific recurring themes, such as the influence of ritual participation on personal identity, the role of temple activities in fostering community cohesion, and the integration of traditional

religious beliefs with modern values. Anonymisation of observation notes and interview transcripts guaranteed confidentiality, and all participants gave their informed consent. Although the study's singular temple focus restricts its generalisability and raises the possibility of researcher bias, it provides insightful information about the function of religion at the Nawagamuwa Pattini Devālaya.

Results and Discussion

Nawagamuwa Pattini Devālaya operates as a vibrant spiritual place with high levels of ritual and ceremony participation, according to observations and interviews. Consistent involvement and active participation in events like prayer services, chanting services, and festivals characterise devotionals (Obeyesekere, 1984). Interviewees reported that their daily decisions and community values are significantly influenced by their religious beliefs, demonstrating the temple's role in shaping both personal and collective identities. For example, several devotees mentioned that they regularly seek guidance from temple rituals before making important life choices, such as marriage, business decisions, or resolving family disputes. The temple plays a significant role in shaping social attitudes and community values. A sense of community and common values are fostered by the teachings and practices of the temple, according to devotees, which direct their moral and ethical decisions. To spread its influence outside of the religious realm, Nawagamuwa Pattini Devālaya also actively engages in public and community activities. Interviews with devotees showed that they coexisted with modern scientific beliefs alongside their religious beliefs, for example, many mothers who are trying to conceive visit the temple to seek divine assistance, and they often combine their spiritual practices with medical treatments, illustrating how both can coexist harmoniously. These results contradict several of the secularisation theory's main hypotheses, which include privatisation and a decline in religious participation. Rather, the temple shows a strong public presence and active religious participation, indicating that religion remains a major part of community life. These results raise the possibility that the secularisation theory falls short of explaining the complex interplay between religion and society in modern times. To find more general patterns in religious engagement, future studies might investigate different religious locations and practices. Studies with a longitudinal design may shed light on how religious practices change over time in reaction to societal and cultural shifts. Furthermore, looking into how digital technology has shaped religious communities may provide insightful insights into how religion will develop in contemporary society.

Conclusion and Recommendations

This study reevaluates secularisation hypotheses by investigating the role of religion at Nawagamuwa Pattini Devālaya. The findings reveal that the temple remains a vibrant religious centre with high levels of participation in rituals and ceremonies, such as weekly rituals and annual Gammadu Shanthikarma and Perahera festivals. Devotees report that their social attitudes and community values are significantly influenced by these practices. For instance, many individuals visit the temple to wish for babies while seeking medical assistance, illustrating a blend of faith and modern healthcare. During the COVID-19 pandemic, devotees sought divine health blessings alongside vaccinations, highlighting the coexistence of religious and scientific beliefs. Furthermore, the temple actively engages in public and community activities, which reinforces its influence in both private and public spheres. For example, Nawagamuwa Pattini Devālaya organises community health camps offering medical check-ups, fostering communal well-being. Additionally, it takes part in local festivals, showcasing cultural practices that strengthen community ties. Testimonies from devotees demonstrate that Nawagamuwa Pattini Devālaya is not just a place of worship but also a vital community hub. These findings challenge secularisation theory's predictions of declining religious participation and privatisation, suggesting that strong religious commitment and public presence persist. Given Sri Lanka's unique path of modernisation, this study emphasises the need for a nuanced understanding of secularisation that accounts for the resilience of religious practices. Future research could look at other religious sites and traditions to identify broader trends. Longitudinal studies may provide insights into the evolution of religious practices and beliefs over time. Furthermore, researching digital technology's role in shaping religious communities may provide valuable insights into the future of religion in modern societies.

References

- Embuldeniya, P. (2018). A study on the cult of goddess Pattini: With special reference to the left bank of Kelani River. *Journal of Social Sciences - Sri Lanka*, 71–81.
- Obeyesekere, G. (1984). *The cult of the goddess Pattini*. University of Chicago Press.
- Owens, N. (2015). Deconstructing secularisation. *Berkeley Undergraduate Journal*, 1–21.

A COMPREHENSIVE INVESTIGATION INTO THE SCHOLARLY ARGUMENTS SURROUNDING THE BUDDHIST CONCEPT OF NIRVĀṆA

Ven. B. SunandaBodhi^{1*}

¹ Faculty of Graduate Studies, Buddhist and Pali University of Sri Lanka, Sri Lanka

Abstract

The concept of Nirvāṇa, as taught by the Buddha 2,500 years ago, represents the ultimate goal of attainment in this life. However, its interpretation has evolved, significantly impacting the future survival of Buddhism. This research aims to investigate contemporary ideas of the concept of Nirvāṇa within the Buddhist community and among various scholars. Employing both qualitative and quantitative methods, the study utilises content analysis of written, verbal, and online sources. A quantitative survey was conducted, collecting responses from 98 individuals (N=98) within the contemporary Buddhist community regarding their understanding of Nirvāṇa. The Pali Canon presents Nirvāṇa as the ultimate goal of the Buddhist path, characterised by the cessation of suffering, the extinguishing of the fires of greed, hatred, and delusion, and liberation from the cycle of rebirth. Asanga Tilakaratne (1992) asserts that Buddhist Nirvāṇa can be attained in this life, unlike other religions where realisation is believed to occur only after death. The Dalai Lama states that Nirvāṇa cannot be realised through science, as it is beyond scientific understanding. The contemporary Buddhist community reflects diverse opinions: a majority (65%) express a strong desire to achieve Nirvāṇa within their current lifetime, while a smaller proportion (11%) are uncertain about their ability to do so. Some believe that Nirvāṇa can only be attained in the era of the future Buddha, Maitreya, or at some other point in one's samsaric (cyclic) journey. Nonetheless, the Buddha emphasised that Nirvāṇa should be achieved in one's current lifetime as a means to free oneself from all suffering faced today.

Keywords: *Buddhism, Buddhist community, Contemporary Ideas, Nirvāṇa, Suffering*

*Corresponding author: Tel.: +94 (70) 2555999; Email: sunandabodhi@gmail.com;
<https://orcid.org/0009-0006-2458-2860>

Introduction

The concept of Nirvāṇa is central to Buddhist philosophy and has been the subject of extensive scholarly debate and analysis. Nirvāṇa is often described as the ultimate goal of Buddhist practice, a state of being free from suffering, desire, and the cycle of rebirth. However, the precise definition and nature of Nirvāṇa have been interpreted and understood in various ways by different Buddhist traditions and scholars. This introduction will provide an overview of the key scholarly arguments and perspectives surrounding the Buddhist concept of Nirvāṇa. It will explore the diverse interpretations of Nirvāṇa, the philosophical and textual sources that inform these interpretations, and the ongoing debates and discussions within the scholarly community. Over 2,500 years ago, the Buddha's teachings placed the attainment of Nirvāṇa- the cessation of suffering and the cycle of rebirth - as the ultimate goal and purpose of the spiritual path. The study aims to conduct a thorough investigation into the concept of Nirvāṇa as presented in the Sutta Pitaka, alongside contemporary interpretations and ideas surrounding Nirvāṇa.

Material and Methods

This research on the Buddhist concept of Nirvāṇa employs a mixed-method approach, integrating both qualitative and quantitative data collection and analysis techniques. This multi-faceted methodological framework is designed to capture the nuanced and multifaceted nature of the scholarly arguments and interpretations surrounding Nirvāṇa.

In the qualitative component, the primary data sources include the Pali Canon, specifically the Sutta Pitaka, which represents the foundational textual sources for understanding the Buddha's original teachings on Nirvāṇa. The qualitative data were subjected to in-depth content analysis, allowing the researcher to identify and critically examine the various scholarly arguments, interpretations, and debates surrounding the Buddhist concept of Nirvāṇa. In the quantitative component, the research engaged directly with the Buddhist community in Colombo areas, selecting a sample of 98 participants, including Bhikkhus (9), Bhikkhunis (4), Upāsakas (55), and Upāsikās (30). Through structured questionnaires and surveys, the researcher gathered contemporary data on the respondents' understanding, beliefs, and experiences related to the concept of Nirvāṇa.

Results and Discussion

The qualitative analysis of the Pali Canon, scholarly publications, and verbal sources has revealed several key insights: The Pali Canon presents Nirvāṇa as

the ultimate goal of the Buddhist path, characterised by the cessation of suffering, the extinguishing of the fires of greed, hatred, and delusion, and the liberation from the cycle of rebirth. Asanga Tilakaratna argues in his thesis that Buddhist Nirvāṇa can be attained within one's lifetime, whereas the ultimate goals of other religions cannot be realised within a single lifetime (Thilakaratne, 1992). The Dalai Lama recently stated, "I have great respect for science. However, scientists alone cannot prove the existence of Nirvāṇa. Science can demonstrate that certain practices can distinguish between a happy life and a miserable one. Nonetheless, a true understanding of the mind's nature can only be achieved through meditation (Lopez, 2008). Buddhism is fundamentally about the practice of Dhamma, which involves realising Nirvāṇa through the practice of the Four Foundations of Mindfulness. Harvey provides a comprehensive overview of Buddhist teachings, including the significance of Nirvāṇa and its realisation through practice (Harvey, 2013).

Quantitative Findings

The quantitative survey of the Buddhist community (n=98) revealed the following key insights: The Buddhist community consists of 9 Bhikkhus, 4 Bhikkhunis, 55 Upāsakas, and 30 Upāsikās.

The majority of respondents (65%) expressed a strong desire to achieve Nirvāṇa within their current lifetime. The core teachings of Buddhism, including the Four Noble Truths and the Eightfold Path, which are essential for understanding the attainability of Nirvāṇa in this lifetime (Rahula, 1974). This indicates a prevalent belief among the sampled Buddhist community that Nirvāṇa can be realised and experienced in the present, through dedicated spiritual practice and the realisation of the teachings. A smaller percentage of the respondents (4%) held the aspiration to attain Nirvāṇa during the future era of the Buddha Maitreya. This perspective reflects a belief in a prophesied time of renewed spiritual flourishing, when the teachings of the Buddha will be fully revived, and the path to Nirvāṇa will be more accessible. A significant proportion of the respondents (31%) expressed a desire to achieve Nirvāṇa at some point in the future, within the ongoing cycle of rebirth and existence (samsara). This perspective suggests a recognition of the profound difficulty and rarity of attaining Nirvāṇa, even as they maintain hope in its eventual realisation.

The majority of respondents (82%) expressed a strong and active desire to attain Nirvāṇa. This indicates a prevalent belief among the sampled Buddhist community that Nirvāṇa can be realised through dedicated spiritual practice and the application of the Buddha's teachings. A smaller proportion of the

respondents (11%) expressed uncertainty about their ability to achieve Nirvāṇa within their current lifetime. This perspective suggests a recognition of the profound difficulty and rarity associated with the attainment of this ultimate state of liberation. A small minority of the respondents (2%) indicated that they were not actively trying to attain Nirvāṇa in this life. This may reflect varying levels of engagement or prioritisation of the goal of Nirvāṇa within their individual Buddhist practice and worldview.

Conclusion and Recommendations

The ultimate goal of Buddhism is often described as Nirvāṇa. However, Buddha clearly taught that all human beings are subject to suffering. Therefore, Buddha preached that everyone should strive to achieve Nirvāṇa. If someone is unable to attain Nirvāṇa, it means they will continue the cycle of rebirth. Yet, Buddha also emphasised that Nirvāṇa can be attained by everyone through the practice of the Four Foundations of Mindfulness, which he taught over 2,500 years ago. Despite Buddha's clear teachings, different ideas about the nature of Nirvāṇa have emerged within the Buddhist scholarly and practitioner community over time. According to the sample of the Buddhist community, today people do not fully understand the depth of Nirvāṇa and its significance. Additionally, some believe that Nirvāṇa can only be attained in the era of the future Buddha, Maitreya, or at some other point in one's samsaric (cyclic) journey. In summary, while Nirvāṇa remains the ultimate aim of Buddhism, there are varying interpretations and understandings of this concept among different Buddhist traditions and individuals. Staying true to Buddha's original teachings on the attainability of Nirvāṇa through diligent practice is an important task for the Buddhist community.

References

- Harvey, P. (2013). *An introduction to Buddhism: Teachings, history and practices*. Cambridge University Press.
- Lopez, D. (2008). *Buddhism and science*.
- Rahula, W. (1974). *What the Buddha taught*. Grove Press.
- Thilakaratne, A. (1992). *Transcendence, ineffability, and Nirvāṇa: An analysis of the relation between religious experience and language according to early Buddhism*. University of Hawai 'i.

A GRIEF COUNSELING INTERVENTION AFTER MASS TRAUMA: LESSONS LEARNT FROM THE VICTIMS OF THE EASTER SUNDAY ATTACK IN SRI LANKA

G.M.P.V Godakanda^{1*}, Ishara Wanniarachchi²
^{1, 2} *Department of Sociology, University of Ruhuna*

Abstract

The Easter Sunday attacks in Sri Lanka caused not only physical devastation but also profound psychological distress to the affected individuals. Grief counselling provides essential support to individuals coping with the psychological impact of traumatic events. The objectives of the research were the establishment of awareness of grief counselling services amongst the victims of the Easter Sunday Attacks, identifying the alternative coping mechanisms that have been followed by the victims and offering approachable recommendations familiarising grief counselling in Sri Lanka. A qualitative study using purposive sampling, case studies, observations, and thematic analysis revealed a complete lack of awareness among respondents regarding grief counseling services. Furthermore, none of the respondents had received grief counselling services from professional counsellors through government intervention during the post-disaster context. Instead, the findings reveal that the church has played a pivotal role in helping victims cope with their grief through spiritual counselling by utilising tools such as ‘Sethsarana and drama therapies’. The study found that family support, including emotional and practical assistance from immediate relatives, played a pivotal role in helping individuals cope with the aftermath of the attacks. Community support, such as solidarity, collective efforts, and social networks like friendships and peer support, was crucial in their recovery process. Key recommendations include raising awareness of grief counselling, training trauma-informed counsellors, promoting alternative coping mechanisms, empowering communities, and reducing stigma around grief support.

Keywords: *Easter Sunday Attacks, Grief Counselling, Healing, Resilience, Social Support*

**Corresponding author: Email: virashagodakanda@gmail.com*

Introduction

The 2019 Easter Sunday bombings in Sri Lanka led to the tragic loss of more than 250 lives. The brutality of it rattled Sri Lankan Society and had psychological consequences beyond the physical damage. Though reconstruction of physical damage was done, there was less expression of concern and less investment over the significant need for mental health, after that catastrophe. Sri Lanka faced many mass casualty incidents involving mass killing, such as the Civil War, the Tsunami in 2004, the Covid-19 global pandemic and the ongoing crisis situation. Therefore, there was repeated exposure to the traumas of significant losses in recent Sri Lanka. An issue during these large-scale national disruptions was the low availability of standard counselling services for grief. During large-scale national disruptions, studies indicate that nearly 60% of individuals experiencing trauma do not receive appropriate mental health care. Additionally, over 75% of mental health providers feel unprepared to address grief, highlighting significant gaps in counselling services during crises (Jayawickreme et al. 2012).

The Easter Sunday attack incident also highlighted the need for grief counselling services, although questions remain about the effectiveness of these services. Therefore, the research on grief following the Easter Sunday attack highlights the necessity of addressing catastrophic grief. It targets the establishment of proper awareness about grief counselling services amongst the victims, establishing alternative coping mechanisms, and offering approachable recommendations familiarising grief counselling in Sri Lanka. The value of grief counselling is being recognised in helping people adjust to losses. Similar to the 2004 tsunami and the 30 years of civil war, the ongoing economic crisis (Gordon, 2022; Raiser, 2023) and the lasting effects of the COVID-19 pandemic (Shuja et al., 2022; Mastrotheodoros; Ioannidis, 2020; Gruber et al., 2020) have contributed to the psychological burden faced by the people of Sri Lanka. Most of the survivors of attacks plunged with emotions need constant support, more than mere crisis intervention. Kim's dissertation examined best practices in grief counselling at university counselling centres. In his research, Bhuiyan analysed the consequences of the Easter Sunday terrorist attacks in Sri Lanka in detail. A study by Pfefferbaum et al. reviewed the positive effects of interventions on post-traumatic stress. Finally, this study is filling a gap in research by addressing the silent grief of the victims of the Easter Attacks.

Material and Methods

This qualitative study addresses the psychological impact of the Easter Sunday attack. It focuses on victim families from St. Sebastian's Church in Katuwapitiya. A purposive sample of directly affected families, aged 18 to 60, who sustained injuries, was selected. Key informants' insights were also included. Secondary data included the accessible sources referred to the Office for Reparations, the Office for National Unity and Reconciliation, and St. Sebastian Church. This study has been supported by the theory of social support and the grief model for the data analysis. The ten themes identified included access to counselling services, how well grief counselling had been designed, hurting or impeding grief and recovery, physical and psychological trauma, family help, reflection and growth, lacking governmental support, community, intergenerational trauma, and contrasting responses to post-war versus post-attacks situations and these were coded manually by using open coding to identify key concepts and recurring themes. Ethical considerations were paramount throughout the study. Informed consent was obtained from all respondents, ensuring their understanding of the study's purpose and the voluntary nature of their participation.

Results and Discussion

The research findings reveal a stark reality that victims of the attacks were entirely unaware of formal grief counselling services. Many sought healings in a programme called Sethsarana, highlighting the critical role of grassroots initiatives in the absence of official support. In the aftermath of the attacks, victims relied heavily on personal networks and religious institutions for support. The void left by the absence of governmental mental health programmes forced victims to turn to community-based projects like Setsarana as their primary source of comfort. Victims expressed deep disappointment with the lack of mental health support provided by official channels, as noted by a key informant. This lack of official support has had far-reaching consequences. Victims have lost faith in the government, increasingly turning to peer-based support systems. Cultural norms and stigmas surrounding grief further compound the issue, deterring many from seeking professional counselling.

In response, victims have adopted a range of coping strategies. These include relying on religion, family support, and personal reflection. Other approaches involve community support, expressing grief, building resilience, adapting to new circumstances, finding gratitude, creating new life paths, and acknowledging complex emotions. Notably, the pursuit of justice has emerged

as a significant coping mechanism for victims. Many see the fight for justice as an integral part of their healing process, regardless of how long it may take. This ongoing quest for accountability and resolution continues to drive many survivors, providing a sense of purpose and hope for eventual closure. These coping mechanisms align closely with social support theory, emphasising the crucial role of social relationships in overcoming life's challenges. However, financial constraints often limit the effectiveness of these strategies, impeding full spiritual and emotional recovery.

The void left by the absence of governmental support has cast a long shadow over the lives of those affected by the Easter attacks, as articulated by a respondent. Despite these challenges, survivors have found ways to persevere. Despite the absence of formal counselling, survivors found healing in communal spaces where they could share their pain, with families emerging as unsung heroes in the aftermath. Drama therapy has emerged as a particularly effective tool for victims, especially children. Through creative activities, survivors found outlets for emotional expression and healing. It is worth noting that while children eagerly participated in drama therapy, many adults were initially sceptical of its effectiveness. However, drama therapy has proven to be a valuable system for PTSD counselling, despite the initial lack of trust from older participants.

Many victims also cope with physical injuries and financial hardships, having lost jobs and income due to the attacks. Financial compensation proved to be a hollow gesture in the face of profound emotional and spiritual suffering, as expressed by an interviewee. Key informants stress the need for government intervention that demonstrates greater cultural competence and transparency. They emphasise that there is no one-size-fits-all approach to coping and grieving. Professional grief therapeutics could provide valuable support, offering both individual and group therapy options to help victims express themselves and seek help effectively. In line with social support theory, the church has played a vital role in meeting emotional support needs, offering informal therapy, and providing spiritual counselling. However, addressing the deep psychological trauma requires more comprehensive structural support at the family, community, and state levels.

Conclusion and Recommendations

Victims of the Easter Sunday Attacks have continued suffering from acute trauma as a result of the failure of psychological counselling required by professional figures. On the one hand, integrating psychological support with spiritual guidance could improve the forecast for recovery and lower

symptoms of desolation. This inculcates that there is a rise in the need for professional psychological resources, counselling services, and trauma-related counselling. There is a need to establish educational outreach programmes aimed at increasing awareness of trauma and its consequences. Training grief-related counsellors through a trauma-informed approach helps them get the relevant skills in the care of support to the affected persons. In addition, the promotion of peer support groups as alternative coping strategies goes a long way in maintaining good mental health resilience. Participatory research would give a viable voice to these communities and ensure that support systems would be relevant. The gap in mental health services can still be bridged by incorporating traditional healers within the network. Services could also be further expanded to increase access through government subsidisation and the use of available options of telehealth. Addressing ethical concerns and reducing the stigma associated with grief support is important, as stigma can prevent individuals from seeking help. Moreover, the research aims to not only implement the proposed recommendations but also highlight potential avenues for future exploration in the field.

References

Bhuiyan, M. K. (2019). The Bloody Easter Sunday terrorist attack in Sri Lanka: What went wrong? *ResearchGate*. <https://doi.org/10.9790/0837-2409083540>

Gordon, G. (2022). The economic crisis in Sri Lanka: Understanding the causes and consequences. *Sri Lanka Journal of Economic Studies*.

Gruber, J., Cassella, C., & Steinhardt, M. (2020). The impact of COVID-19 on mental health: A systematic review. *International Journal of Environmental Research and Public Health*, 17(11), 3970. <https://doi.org/10.3390/ijerph17113970>

Ioannidis, J. P. A. (2020). COVID-19: What the experts think about the risk factors for severe outcomes. *The Lancet Infectious Diseases*, 20(11), 1267–1268. [https://doi.org/10.1016/S1473-3099\(20\)30552-6](https://doi.org/10.1016/S1473-3099(20)30552-6)

Jayawickreme, N., Jayawickreme, E., Goonasekera, M. A., & Foa, E. B. (2012). Distress, wellbeing, and war: Qualitative analyses of civilian interviews from northeastern Sri Lanka. *Intervention*, 10(2), 171–183. <https://doi.org/10.1097/WTF.0b013e328355a98c>

Mastrotheodoros, S. (2020). The impact of COVID-19 on mental health: A global perspective. *Psychological Bulletin*, 146(7), 583–619.

<https://doi.org/10.1037/bul0000273>

Pfefferbaum, B., Nitiéma, P., & North, C. S. (n.d.). The role of mental health interventions following mass trauma: A review. *Psychological Trauma: Theory, Research, Practice, and Policy*.

Raiser, M. (2023). Economic challenges in post-conflict Sri Lanka: A comprehensive analysis. *Journal of South Asian Development*, 15(1), 65–85. <https://doi.org/10.1177/09731741221089234>

Shuja, K., Awan, A., & Qazi, A. (2022). Coping with COVID-19: Psychological resilience and adaptation strategies. *Journal of Health Psychology*, 27(7), 1472–1484. <https://doi.org/10.1177/13591053211046592>

Worden, J. W. (2018). *Grief counselling and grief therapy: A handbook for the mental health practitioner* (5th ed.). Springer Publishing Company.

THE IMPACT OF GENDER STEREOTYPES ON ADMINISTRATIVE DECISION MAKING IN SRI LANKA: STUDY BASED ON THE ADMINISTRATIVE INSTITUTIONS IN YATAWATTA DIVISIONAL SECRETARIAT

P. G. S. I. M. Munasinghe¹, Pradeep Uluwaduge^{2*} and U. G. H. N. Thilakarathna³

^{1,2}*Department of Social Sciences, Sabaragamuwa University of Sri Lanka*

³*Land Use Policy Planning Department, Ministry of Tourism and Lands, Sri Lanka*

Abstract

Gender stereotypes significantly impact administrative decision-making in Sri Lanka. This study investigated these stereotypes within the Yatawatta Divisional Secretariat, aiming to identify prevalent gender stereotypes, analyse their influence on decision-making, and propose strategies to mitigate these biases for equitable governance. Using a mixed-method approach, data were collected through structured questionnaires and unstructured interviews with 100 employees, then analysed using thematic analysis and SPSS. The study found that gender stereotypes, such as perceptions of women's competence, were pervasive and affected leadership opportunities and decision-making processes. Cultural, religious, and organizational factors exacerbated these biases, leading to unequal resource allocation and hindering women's advancement. The study concluded that addressing these stereotypes through policy reforms, diversity training, and gender-sensitive recruitment could foster an inclusive environment and enhance administrative effectiveness. To address these issues, the research recommends a multifaceted approach including policy reforms, leadership training, and awareness campaigns. Promoting gender equality and inclusive governance is essential for effective and equitable public administration.

Keywords: *Administrative Decision-Making, Gender Stereotypes, Sri Lanka, Women in Leadership, Yatawatta Divisional Secretariat*

*Corresponding author: Tel.: +94 (71) 8237229; Email: pradeep@ssl.sab.ac.lk;
<https://orcid.org/0000-0001-5591-1707>

Introduction

Gender stereotypes are deeply entrenched within Sri Lankan society, profoundly influencing administrative decision-making across various sectors. Rooted in traditional norms, these stereotypes shape perceptions of men's and women's roles and capabilities within administrative institutions (Jayawardena, 1986 and Sivakumar, 2021). In Sri Lanka, societal norms often dictate that men are better suited for leadership roles, while women are relegated to supportive positions. These stereotypes can have a profound impact on women's lives, restricting their choices and opportunities (Herath, 2015). Consequently, gender biases permeate hiring practices, promotion opportunities, and organisational culture within administrative bodies. Therefore, the low representation of women in lower levels of decision-making is one of the major problems existing in Sri Lanka at the moment. This has created several major invisible problems in the country, making a negative impact, especially on women and the common society. It has also had a direct negative impact on the country's development (Gunatilleke, 2003). The impact of these stereotypes extends beyond individual experiences to affect broader governance structures. Administrative decisions on resource allocation, service provision, and law enforcement significantly impact all citizens, making it imperative that these decisions are made fairly and equitably, without gender bias. However, entrenched stereotypes lead to discriminatory practices that hinder women's advancement and participation in decision-making processes. This perpetuates inequality and limits the diversity of perspectives essential for effective governance. By examining these biases and their implications within administrative settings, this study sought to identify strategies to mitigate gender stereotypes and promote greater gender equality in administrative decision-making in Sri Lanka.

Material and Methods

This study adopted a mixed-method approach to investigate the impact of gender stereotypes on administrative decision-making within the context of Sri Lanka. It was conducted specifically in the administrative setting of the Yatawatta Divisional Secretariat. Primary data collection involved structured questionnaires and unstructured interviews, utilising non-probability sampling techniques. A representative sample of 100 respondents were selected from the Divisional Secretariat Office in Yatawatta and Yatawatta Pradeshiya Sabha, with 80 participants contributing to surveys and 20 engaging in interviews. Secondary data were gathered from a variety of sources including scholarly articles, books, newspapers, and online documents. Quantitative data were analysed using SPSS, while thematic analysis was employed for

qualitative data. Findings from the study were presented through texts, charts, and figures, offering comprehensive insights into the influence of gender stereotypes on administrative decision-making processes in Sri Lanka.

Results and Discussion

Women in Sri Lanka's administrative sector face significant challenges due to entrenched gender stereotypes. Gender stereotypes have become a strong factor in administrative decision-making processes. Accordingly, the main findings of the study can be highlighted as follows:

Gender Stereotypes and Leadership Opportunities: The study found that traditional gender roles heavily influence perceptions of women in leadership positions. In contrast, study revealed that women in leadership roles experience more intense scrutiny than men. This scrutiny leads to decreased confidence and reluctance to assert themselves in decision-making. Female leaders are frequently perceived as less competent than their male counterparts, impacting their authority and effectiveness, particularly in undervalued high-stakes scenarios.

Influence on Decision-Making Processes: The study highlighted that gender stereotypes significantly impacted administrative decision-making. Women in administrative roles face systemic biases, limiting their participation and influence. Traditional stereotypes shape decision-making dynamics, resulting in less inclusive outcomes. This perpetuated a cycle of exclusion, minimising women's contributions and reinforcing gender disparities. Data indicated that decisions by women were frequently questioned, causing delays and inefficiencies.

Cultural and Religious Factors: Cultural and religious norms in Sri Lanka compound challenges for women in administrative roles, reinforcing traditional gender roles and restricting their decision-making opportunities. The study highlighted how cultural expectations and religious beliefs shape attitudes toward women in leadership, adding extra barriers to their advancement. Cultural narratives prioritize male leadership, hindering women's representation in high-ranking administrative positions.

Organisational Culture and Gender Equality: The study highlighted that the organisational culture within the Yatawatta Divisional Secretariat significantly perpetuated gender stereotypes. It revealed a lack of gender-sensitive policies, limiting women's consideration for leadership roles. This culture reinforced biases, constraining women's influence on administrative decisions. Male-dominated networks and informal decision-making processes

often excluded women, diminishing their impact. Additionally, gender-biased recruitment and promotion criteria entrenched disparities, hindering women's advancement.

Professional Experience and Education Levels: The professional experience and educational background of respondents provided crucial insights into how gender stereotypes affect their careers. Despite possessing higher education levels and extensive professional backgrounds, women confront formidable barriers due to ingrained gender biases. The study revealed that even highly qualified and experienced women face resistance and skepticism from their male counterparts, manifesting in decision questioning, authority undermining, and limited career advancement opportunities. Data suggested that women often exert more effort than male colleagues to validate their competence and earn equal respect and recognition.

Accordingly, the study's findings highlighted the extensive impact of gender stereotypes on administrative decision-making in Sri Lanka. It emphasised the importance of addressing these biases to cultivate a more inclusive and efficient administrative environment.

Conclusion and Recommendations

The study on the impact of gender stereotypes in the Yatawatta Divisional Secretariat revealed that these biases significantly influence administrative decision-making and hinder women's advancement in leadership roles. To address these issues, it is crucial to implement gender-neutral policies, promote diversity and inclusivity training, and establish mentorship programmes for women. Additionally, revising recruitment and promotion processes to ensure fairness can foster an inclusive work environment. By recognizing and actively confronting gender stereotypes, institutions can create equitable workplaces, enabling all employees to reach their full potential and enhancing gender diversity in leadership positions. This approach will contribute to more effective and just administrative practices.

References

Gunatilleke, N. (2003). Women's under-representation in decision-making in Sri Lanka. Retrieved from SJP: [http://dr.lib.sjp.ac.lk/bitstream/handle/123456789/4918/Women%27s%20Under-representation%20in%20Decision making%20In%20Sri%20Lanka-001-015.pdf?sequence=4&isAllowed=y](http://dr.lib.sjp.ac.lk/bitstream/handle/123456789/4918/Women%27s%20Under-representation%20in%20Decision%20making%20In%20Sri%20Lanka-001-015.pdf?sequence=4&isAllowed=y)

Herath, H. (2015). Place of women in Sri Lankan society: Measures for their empowerment for development and good governance. Retrieved from SLIJOL: <https://vjm.sljol.info/articles/1>

Jayawardena, K. (1986). *Feminism and nationalism in the third world*. The University of Michigan; Zed Books.

Sivakumar, K. (2021). Gender discriminatory social norms and their impact on rights and freedoms of women. Retrieved from LST Lanka: <https://www.lstlanka.org/wp-content/uploads/2022/07/Doc1.pdf>

THE IMPACT OF AGING WORKFORCE ON PUBLIC SECTOR PRODUCTIVITY: WITH SPECIAL REFERENCE TO THE KANDY MUNICIPAL COUNCIL'S PAY & GO INITIATIVE PROGRAMME

N.V.L. Chamali¹, G.C.L. Pathirana^{2*}

^{1, 2} *Department of Social Sciences, Sabaragamuwa University of Sri Lanka*

Abstract

Sri Lanka's demographic shift towards an aging workforce poses unique challenges and opportunities, particularly within the Kandy Municipal Council (KMC). This study examined the impact of an aging workforce on public sector productivity based on the KMC's Pay and Go Initiative Programme (PGIP), utilising a mixed-methods approach that includes structured questionnaires and unstructured interviews with 185 respondents. The findings highlight that while older employees bring valuable experience and strategic capabilities, they need help adapting to new technologies, affecting service quality and efficiency. Continuous education and training are essential to maintain productivity and foster a supportive work environment. The study recommends targeted training programmes, intergenerational knowledge transfer, and user-friendly technological solutions to enhance productivity. By leveraging the diverse skills of older and younger employees, the KMC can optimise service delivery and improve efficiency amidst demographic changes.

Keywords: *Aging Workforce, Kandy Municipal Council, Pay & Go Initiative, Public Sector Productivity, Service Quality*

*Corresponding author: Tel.: +94 (77) 9542062; Email: pathi@ssl.sab.ac.lk;
<https://orcid.org/0009-0005-7590-0892>

Introduction

An aging workforce refers to the phenomenon where a more significant proportion of employees within an organisation are older, a trend observed globally due to healthcare and life expectancy improvements. The number of people aged 65 years or older worldwide is projected to more than double, rising from 761 million in 2021 to 1.6 billion in 2050. In 2021, 1 in 10 people worldwide were aged 65 or above. In 2050, this age group will account for 1 in 6 people globally. This demographic is growing faster than any of the younger age groups due to decreased fertility and increased life expectancy, and this estimate is anticipated to quadruple by 2050 (Ottinger et al., 2024). This demographic shift brings unique challenges and opportunities, particularly in the public sector, where workforce productivity is crucial for effective service delivery. The literature stresses that a worker's productivity systematically varies over his or her working life for reasons such as the accumulation of experience over time, depreciation of knowledge, and age-related trends in physical and mental capabilities (Shekhar et al., 2016). Public sector productivity involves the efficiency and effectiveness of public services, impacting national development and public welfare. Public sector productivity is as important to a country's economic performance as the private sector (Linna et al., 2010). Developing countries like Sri Lanka are now experiencing similar trends, with the public sector significantly impacted. Also, in many developed countries, the aging workforce has been a significant concern for several decades, influencing economic and social policies. The KMC, a key administrative body in the Central Province of Sri Lanka, provides an insightful case study for understanding these dynamics. This council is responsible for various public services, including urban planning, waste management, public health, and social services. As its workforce ages, examining how this shift affects productivity is vital. This study explores the impact of an aging workforce on public sector productivity within the KMCs' Pay and Go Initiative Programme PGIP. By focusing on this specific context, the study seeks to provide insights into broader implications for Sri Lanka, contributing to a better understanding of managing and optimizing productivity amid demographic changes. The specific objectives include identifying challenges and opportunities an aging workforce presents and suggesting strategies to maintain or improve productivity in the public sector.

Material and Methods

This study employed the mixed methods approach to ensure a comprehensive understanding of the phenomenon under investigation. Data collection involves both primary and secondary data. Structured questionnaires and

unstructured interviews were used for primary data collection, targeting residents and public sector employees. Secondary data was gathered from various sources, including Census Reports, Labor Force Surveys, KMC documents, and research articles. The research sample frame employs a non-probability sampling method within the KMC area, consisting of 185 respondents, 110 residents, and 75 public sector employees. Data analysis involves thematic analysis for qualitative data, correlation, and regression analysis using SPSS, and descriptive analysis using Microsoft Excel. Findings from the study were presented through texts, charts, figures, and tables, which provided detailed insights into the impact of an aging workforce on public sector productivity in the KMC's PGIP.

Results and Discussion

The aging workforce challenges public sector productivity, particularly within local government entities like the KMC. As demographics shift and older employees remain in the workforce longer, understanding the implications of this trend becomes increasingly vital for effective management and organisational performance. The demographic analysis highlighted a significant increase in older workers within the KMC. The data showed that the workforce includes approximately 2042 employees, a notable portion being over 50 years old. This demographic shift has implications for service quality and productivity, as older employees present unique challenges and opportunities for various sectors, particularly the public sector. Accordingly, the main findings of the study are as follows:

1. **Age Distribution:** The age distribution within the KMC workforce directly affects productivity. Older employees bring valuable experience and strategic capabilities but often struggle with adopting new technologies, slowing operations down. For example, during the implementation of the PGIP, older staff faced challenges in learning the digital payment system, causing service delays. The survey revealed that residents noticed a decline in service quality, which they attributed to the aging workforce.
2. **Education and Training:** Continuous education and training programmes are crucial for maintaining productivity in an aging workforce. The researcher suggests implementing various programmes tailored to the specific needs of older employees. For instance, technology training sessions can help them proficiently use new software and digital platforms, such as the PGIP. Additionally, mentorship programmes that pair older employees with younger staff can facilitate knowledge transfer and

enhance collaborative skills. Workshops on communication and customer service can also improve interactions with the public, ensuring high-quality service delivery. The study found that employees with higher education and regular training exhibited better service outcomes, underscoring the importance of investing in professional development to equip older workers with the necessary skills to adapt to evolving technologies and methodologies.

3. **Skills and Experience:** Older workers' extensive experience positively influences service quality and problem-solving capabilities. However, the study found a disparity in task completion rates between older and younger employees, with older workers excelling in accuracy and decision-making but often lagging in speed and physical tasks.
4. **Technology Adoption and Innovation:** Technological proficiency significantly determines KMC workforce productivity. Older employees often face challenges adapting to new technologies like digital payment systems (like the PGIP), customer relationship management software, and data analytics tools. To address this, targeted training programmes are essential. For instance, implementing training sessions on user-friendly digital platforms can empower older workers to utilise these technologies effectively. Additionally, introducing automation in routine tasks, such as scheduling and reporting, can streamline operations and enhance productivity across all age groups. KMC can better support its aging workforce and improve efficiency by fostering a continuous learning and innovation culture.
5. **Workplace Attitudes and Environment:** A positive environment and supportive attitudes towards aging employees can enhance productivity. The study highlighted the importance of mentoring programmes, knowledge-sharing platforms, and intergenerational team-building activities to foster collaboration and engagement among employees of different ages.

The findings indicate that while the aging workforce in the KMC has valuable experience, it faces challenges in technology adoption and physical tasks. To address this, the council should invest in continuous education, training, and professional development. Robust change management and infrastructure for technology support are essential. Leveraging diverse skills and experiences will optimize service delivery and efficiency. Strategic workforce management is vital to navigating demographic transitions and maintaining productivity in the public sector.

Conclusion and Recommendations

The study concluded that an aging workforce impacts KMC's PGIP productivity positively and negatively. Experienced older workers enhance productivity by providing valuable skills and mentoring younger employees, as evidenced by their significant role in the PGIP's service delivery. However, challenges such as difficulty adapting to new technologies like digital payment systems can hinder efficiency, and increased health-related absences further exacerbate this issue.

The study recommends tailored training programmes to address these challenges to improve technological proficiency, foster intergenerational knowledge transfer, and implement user-friendly technological solutions. Additionally, creating flexible work arrangements and promoting lifelong learning initiatives are crucial. Continuous investment in education, training, and technology is essential to ensure productivity and inclusivity in an aging workforce.

References

- Aiyar, S., & Ebeke, C. (2015). The impact of workforce aging on European productivity. *IMF Working Paper*, 16(238). <http://doi.org/10.5089/9781475559729.001>
- Eliya, R. P. (1999). Economic impacts of demographic aging: With special emphasis on Sri Lanka and old-age income security. *Institute of Policy Studies of Sri Lanka*, 11(01). <http://www.ips.lk>
- Linna, P., Pekkola, P., Ukko, J., & Melkas, H. (2010). Defining and measuring productivity in the public sector: Managerial perceptions. *International Journal of Public Sector Management*, 23(05), 479–499. <http://doi.org/10.1108/09513551011058493>
- Nagarajan, N., Teixeira, A. A. C., & Silva, S. T. (2016). The impact of an aging population on economic growth: An exploratory review of the main mechanisms. *Instituto Ciencias Sociais da Universidade de Lisboa*, 51(218). <https://www.jstor.org/stable/43755167>
- Ottinger, M. A., Grace, J. K., & Maness, T. (2024). Global challenges in aging: Insights from comparative biology and One Health. *Journal of Frontiers in Toxicology*, 6(1), 1–13. <https://doi.org/10.3389/ftox.2024.1381178>
- Perera, E. L. S. J. (2017). Aging population in Sri Lanka: Emerging issues, needs, and policy implications. *United Nations Population Fund, Sri Lanka*, 12(09). <http://srilanka.unfpa.org>

THE EFFECTIVENESS OF THE "ASWESUMA" WELFARE PROGRAMME ON THE DEVELOPMENT OF LOW-INCOME COMMUNITY; A STUDY BASED ON THE ŌPANĀYAKA DIVISIONAL SECRETARIAT AREA

Sayuri Gamage^{1*}

¹*Department of Social Sciences, Sabaragamuwa University of Sri Lanka, Belihuloya, 70140, Sri Lanka*

Abstract

This study examined the effectiveness of the "Aswesuma" Welfare Programme on the development of low-income communities in the Ōpanāyaka Divisional Secretariat area. Employing a mixed-methods approach, primary and secondary data were collected. Quantitative data were gathered through questionnaires and analysed using MS Excel, while qualitative data from semi-structured interviews and analysed using thematic analysis method. Since 1989, welfare benefits have been provided to low-income families, and this study reviews their impact. Findings reveal that, once the Aswesuma allowance period ends, the majority of beneficiaries have to face poverty due to poor management and lack of sustainable financial planning. Despite its potential, Sri Lanka's significant economic opportunity had turned into a threat. The study recommends how the government can develop the targeted projects to uplift the low-income communities within a specified timeframe. This research emphasises the need for better strategies to boost economic development of low-income communities.

Keywords: *Aswesuma, Low-income Community, Effectiveness, Strategic Development, Management*

**Corresponding author: Tel.: +94 (70) 5851027; Email: sayukanchana825@gmail.com; <https://orcid.org/0009-0009-4605-6556>*

Introduction

The Sri Lankan government has taken significant steps to eradicate poverty, with one of the main initiatives being the "Aswesuma" welfare programme, approved on July 31, 2023. This programme aims to achieve a poverty-free Sri Lanka by 2048 by selecting beneficiaries based on indicators such as education, health, economic status, and housing conditions. Since 1989, Sri Lanka has implemented various welfare programmes, including the Janasaviya Trust Fund in 1990 and the Samurdhi programme in 1995. The primary objective of evaluate its impact on poverty eradication and community development. Despite numerous valuable programmes, Sri Lanka still struggles with poverty due to gaps in management and monitoring. Addressing these gaps involves closely examining how beneficiaries utilise funds and sustain themselves post-benefit period to develop effective strategies for the "Aswesuma" programme. In 1975 Donald Van Meter and Carl Van Horn introduced an approach to emphasise the importance of clear goals, adequate resources, effective communication, and societal stability in implementing projects. Timely monitoring reveals deficiencies, such as insufficient funds and personnel, allowing for corrective actions to ensure success. Identifying and addressing these issues is crucial for the effective management and development of ongoing programmes and projects.

Material and Methods

This research was conducted in the Ōpanāyaka Divisional Secretariat area, which comprises 20 divisions and is considered a rural area. A mixed research method was employed for both primary and secondary data collection. The sample size for primary data was 100 and sample selected on purposive sampling method, consisting of quantitative data from 60 questionnaires representing all 20 divisions, and qualitative data from 40 interviews with officers involved in the Aswesuma programme, as well as beneficiaries and non-beneficiaries of "Aswesuma" programme. Secondary data were collected through reports, website links, and the 2023 census from the Divisional Secretariat office. Quantitative data were analysed using MS Excel and presented through graphs, charts, figures, and tables. Qualitative data were transcribed and analysed using thematic analysis.

Results and Discussion

Since 1989, Sri Lanka has implemented various welfare programmes, but is still poverty persists. While the Aswesuma programme is well-received in the Ōpanāyaka area, data analysis reveals a gap in achieving its vision of a poverty-free Sri Lanka by 2048.

- i. When studying how people utilise the Aswesuma funds, it was found that over 90% use the money for,
 - Paying children's class fees
 - Repaying loans
 - Buying goods and vegetables
 - Paying electricity and water bills
 - Buying medicines
- ii. Despite gratitude for the assistance, 75% of recipients find the amount insufficient for daily needs. Monthly payments alone do not stabilize their economy or improve living standards. Continuous community monitoring and guidance toward sustainable development are essential to achieve the Aswesuma programme's vision, beyond momentary happiness.
- iii. Issues with planning and lack of communication exist. Despite increased technological engagement post-COVID-19, many qualified individuals were not listed as beneficiaries. While 75% of data collectors claimed accurate data, because of unfamiliarity with the community, led to errors. Social attitudes also complicate identifying the truly needy, as people generally feel entitled to government aid.
- iv. When asked how they lived after the beneficiary period, 65% stated will borrow money from moneylenders or neighbors to accomplish daily needs. The low-income community lacked knowledge on using the funds to improve their economy, and the amount was insufficient for investment or savings. This hinders the programme's effectiveness.
- v. For the programme to eradicate poverty, sustainable development and improved living standards are necessary. At the end of the payment period, the area still had 169 houses without toilets, 470 clay houses, and 11 wooden-wall houses, 311 families without homes, 48 families earning less than Rs.1000, and 302 families earning less than Rs.2500. Without addressing these issues, the programme's effectiveness cannot be measured.

Conclusion and Recommendations

Sri Lanka has the potential to become a developed country but must first focus on its low-income communities, who often lack proper income. The government should aim to uplift these individuals to good earners. Apart from the elderly and disabled, many healthy individuals can contribute significantly to the economy. However, many have become dependent on government

support, posing a threat to economic stability. By developing their earning potential, Sri Lanka can harness this untapped opportunity to drive national growth.

As strategic recommendations,

First level

- i. Identifying Real Beneficiaries
 - Utilise area expert officers to identify truly needy individuals.
 - Implement multiple layers of review for quality assurance before finalising the beneficiary list.
- ii. Promoting Entrepreneurship
 - Develop a survey to identify the best entrepreneurial opportunities suitable for low-income individuals in both rural and urban areas.
 - Prepare a list of potential businesses that people can choose from based on their access and interests.
 - With government support, create a proper marketplace for these entrepreneurs.
- iii. Create Access for the Market Facilities
 - The government can address the lack of marketplace access for entrepreneurs under the Aswesuma project by connecting them with buyers through collaboration with relevant government departments and agencies.

Second Level

- iv. Application and Funding Process
 - Call for applications where individuals provide estimates of what they need to start their businesses.
 - If funds are limited, select groups to start businesses collectively.
 - Provide financial support and necessary instruments based on detailed estimates, either individually or in groups.
- v. Training and Support Programmes
 - Collaborate with local governments to offer training and awareness programmes for starting and developing businesses.
 - Introduce buyers to these new entrepreneurs to help establish their market presence.
- vi. Ongoing Financial and Managerial Support
 - Provide a monthly allowance and additional support for business development.

- Local officers should monitor progress and manage support efforts.
- Organise motivational events, such as entrepreneur awards, housing funds, and scholarships for children, to encourage and support these entrepreneurs.

Third Level

vii. Transition to Independence

- Phase out financial support, ensuring that the entrepreneurs are self-sufficient.
- Continue monitoring their progress and provide financial assistance only if necessary to maintain their living standards

References

Aswesuma: Learn from the past. (n.d.). *Daily Mirror*. Retrieved December 25, 2023, from <https://www.dailymirror.lk/print/opinion/Aswesuma-Learn-from-the-past/172-261843>

Aswesuma welfare scheme aimed to create poverty-free Sri Lanka by 2048: Official. (2023, July 11). *EconomyNext*. <https://economynext.com/aswesuma-welfare-scheme-aimed-to-create-poverty-free-sri-lanka-by-2048-official-125748/>

World Bank Group. (2023). *Poverty & equity brief Sri Lanka* (M. Schoch, Ed.) [Review of Poverty & equity brief Sri Lanka]. https://databankfiles.worldbank.org/public/ddpext_download/poverty/987B9C90-CB9F-4D93-AE8C-750588BF00QA/current/Global_POVEQ_LKA.pdf

ADDRESSING SYSTEMIC DISCRIMINATION AND POST-WAR RECONCILIATION CHALLENGES FOR THE TAMIL ETHNIC GROUP IN SRI LANKA

P.S. Sandeepa^{1*}

¹ Department of Social Sciences, Sabaragamuwa University of Sri Lanka

Abstract

The protracted civil conflict in Sri Lanka, rooted in ethno-national tensions between the Sinhalese majority and the Tamil minority, concluded militarily in 2009 but left enduring legacies of systemic discrimination and socio-political marginalisation against the Tamil ethnic group. This research examines the multifaceted challenges of post-war reconciliation and integration of Tamils into Sri Lankan society. Using a sample size of 30 participants, selected through purposive sampling the study investigates historical grievances, contemporary discriminatory practices, and the socio-economic conditions that perpetuate Tamil marginalisation. Additionally, the study critically assesses the effectiveness of current government policies and reconciliation efforts, exploring their impacts on the Tamil community's sense of belonging and security. By analysing the role of both local and international actors in the reconciliation process, this research aims to identify barriers to sustainable peace and propose strategies for fostering a more inclusive and equitable society. The findings are intended to inform policymakers, civil society organisations, and international stakeholders on the necessary steps to address deep-seated ethnic tensions and promote enduring national unity in Sri Lanka.

Keywords: *Ethno-National Conflict, Marginalisation, Post-War Reconciliation, Systemic Discrimination, Tamil Ethnic Group*

*Corresponding author: Tel.: +94 (76) 5680597; Email: sachiugc@gmail.com;
<https://orcid.org/0000-0001-7111-2233>

Introduction

The civil war in Sri Lanka, spanning from 1983 to 2009, was rooted in deep-seated ethno-national tensions primarily between the Sinhalese majority and the Tamil minority. Despite the military defeat of the Liberation Tigers of Tamil Eelam (LTTE) in 2009, the Tamil ethnic group continues to face systemic discrimination and socio-political marginalisation. This study examines the multifaceted challenges of post-war reconciliation for the Tamil population in Sri Lanka, focusing on the social impacts of ongoing discrimination, the effectiveness of reconciliation efforts, and the role of government policies in perpetuating or alleviating ethnic tensions. Understanding these dynamics is crucial for fostering sustainable peace and national unity in a post-conflict society.

Material and Methods

This study employs a mixed-method approach to investigate the challenges of post-war reconciliation for the Tamil ethnic group. Data collection involved both qualitative and quantitative methods. Qualitative data were gathered through interviews and focus group discussions with Tamil community members. These interviews aimed to capture personal experiences and perceptions of systemic discrimination and reconciliation efforts. Quantitative data were collected via surveys distributed to a representative sample of the Tamil population in the Northern and Eastern provinces. The survey included questions on socio-economic conditions, political participation, and perceptions of government policies and reconciliation initiatives.

Results and Discussion

The results indicate that systemic discrimination against the Tamil population persists in various forms, including limited access to quality education, employment opportunities, and political representation. Many Tamils reported feelings of social isolation and mistrust towards government institutions, which they perceive as biased and unresponsive to their needs. The effectiveness of current reconciliation efforts is questioned by the Tamil community, with many expressing scepticisms about the government's commitment to addressing historical grievances and ensuring equal rights.

Economic marginalisation remains a significant issue, with the Northern and Eastern provinces lagging in development compared to other regions. This economic disparity exacerbates feelings of injustice and fuels ethnic tensions.

The study also identifies cultural suppression as a continuing concern for the Tamil community. Efforts to promote a dominant national culture often come at the expense of Tamil cultural practices and language. Interviewees emphasised the importance of preserving Tamil identity and heritage, criticising government policies that they perceive as attempts to homogenise the nation culturally.

Data show that 59% of respondents feel that their cultural traditions are under threat, and 66% believe that more needs to be done to promote and protect Tamil cultural heritage. This cultural suppression contributes to feelings of alienation and hinders efforts to build a truly inclusive society.

The psychosocial impacts of the war and ongoing discrimination are profound. Many Tamils continue to suffer from trauma, stress, and mental health issues stemming from their war experiences and subsequent lack of support. Tamil youth revealed feelings of social isolation and alienation, with participants expressing frustration over their limited opportunities for upward mobility.

The study also found that political marginalisation remains a significant issue for the Tamil community. Many interviewees expressed scepticism about the effectiveness of current reconciliation efforts, describing them as superficial and lacking genuine commitment to addressing Tamil grievances. The limited political representation of Tamils in national decision-making processes contributes to a pervasive sense of disenfranchisement.

Quantitative data highlight this issue, with 72% of survey respondents stating that they do not feel adequately represented in the government. Furthermore, 54% reported low trust in political institutions, citing perceived biases and inefficacies in addressing Tamil issues.

The discussion highlights the need for comprehensive and inclusive reconciliation strategies that go beyond symbolic gestures. Effective reconciliation requires meaningful political participation for Tamils, equitable economic development, and the protection and promotion of Tamil cultural identity. The role of international actors in supporting these efforts is also emphasised, as external pressure and support can be crucial in driving positive change.

Conclusion and Recommendations

Addressing the systemic discrimination faced by the Tamil ethnic group in Sri Lanka requires comprehensive reforms across political, economic, and cultural spheres. This study highlights the need for inclusive governance, equitable development, and cultural preservation to foster lasting national

unity. Tackling the root causes of ethnic tensions and implementing effective reconciliation strategies will help Sri Lanka build a more cohesive and peaceful society. Future research should focus on evaluating the long-term impact of reconciliation efforts and shaping policy through empirical insights.

References

Deane, T. (2022, October 13). Discrimination, marginalisation and violence against minorities in post-war Sri Lanka: An escalating human rights crisis. *International Journal on Minority and Group Rights*. Advance online publication.

Keethaponcalan, S. I. (2019). *Post-war dilemmas of Sri Lanka: Democracy and reconciliation*. London.

United Nations. (2015). *Report of the OHCHR investigation on Sri Lanka (OISL)*. United Nations Office of the High Commissioner for Human Rights.

IMPACT OF EMOTIONAL INTELLIGENCE ON EMPLOYEE'S ORGANISATIONAL COMMITMENT: A CASE STUDY IN DSI COMPANY

H. C. T. Kumara^{1*}, K. A. C. T. C. Kodikara²

^{1, 2} *Department of Public Administration, Uva Wellassa University, Sri Lanka*

Abstract

This research explores the pivotal role of Emotional Intelligence (EI) in fostering organisational commitment among 100 operational-level employees at DSI, a leading Sri Lankan organisation. Utilising Goleman's mixed model of EI, the study assesses four key emotional competencies self-awareness, self-management, social awareness, and relationship management while organisational commitment is evaluated through Meyer and Allen's three-component model. Data collection was conducted through structured questionnaires, with analysis performed using SPSS to generate descriptive statistics and Pearson correlation coefficients. The findings reveal a strong positive correlation between EI and organisational commitment, with relationship management emerging as the most critical factor. Employees with higher EI levels demonstrated significantly greater loyalty and dedication to the organisation. These insights emphasise the transformative potential of EI development programmes in cultivating a more engaged and committed workforce, offering strategic guidance for enhancing human resource practices and driving organisational success at DSI.

Keywords: *DSI, Emotional Intelligence, Employee Engagement, Human Resource Development, Organisational Commitment*

*Corresponding author: Email: chanendra123theshan@gmail.com

Introduction

In the contemporary workplace, the demand for a skilled workforce transcends mere technical proficiency, increasingly encompassing the ability to effectively manage emotions. Emotional Intelligence (EI) is defined as the capacity to recognise, understand, manage, and influence one's own emotions and the emotions of others (Salovey & Mayer, 1990). This concept has gained traction in organisational behaviour research as a critical factor influencing diverse dimensions of employee behaviour, including job satisfaction, performance, and organisational commitment. As Goleman (1995) posits, EI comprises four key dimensions: self-awareness, self-management, social awareness, and relationship management, each playing a vital role in fostering effective workplace relationships and enhancing overall organisational performance.

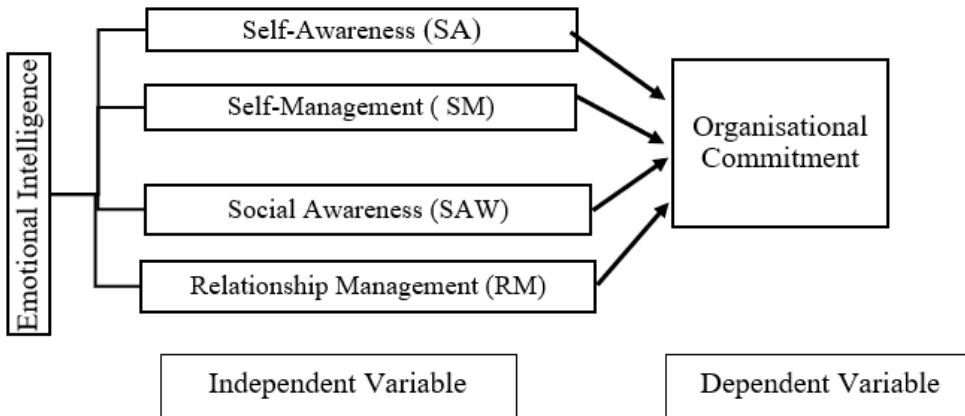
Organisational commitment, on the other hand, refers to the psychological attachment that an employee feels toward their organisation, encompassing emotional, calculative, and normative components (Meyer & Allen, 1991). Research has shown that higher levels of EI correlate with increased organisational commitment, suggesting that emotionally intelligent employees are more likely to engage positively with their organisations (Wang et al., 2015). Furthermore, EI has been linked to improved job performance, reduced turnover, and heightened employee satisfaction, making it a focal point for organisations aiming to cultivate a committed workforce.

This study recognises the significance of EI within the professional milieu and aims to examine its impact on employee commitment at DSI, a prominent organisation in the Sri Lankan retail sector. The research seeks to assess the Emotional Intelligence levels among employees at DSI, focusing on the four fundamental dimensions of EI as outlined by Goleman. By exploring the interplay between these dimensions and employee commitment, this study endeavours to identify which aspects of EI most significantly contribute to fostering a committed workforce.

Key objectives of this research include evaluating the current levels of Emotional Intelligence among employees, analysing the correlations between the identified dimensions of EI and organisational commitment, and ascertaining which specific facets of EI exert the most substantial influence on employee commitment. By addressing these objectives, the study aims to bridge existing gaps in the literature and offer actionable recommendations for refining human resource practices at DSI. The findings are anticipated to benefit the organisation by bolstering employee engagement and loyalty while

enriching the broader understanding of EI's pivotal role in driving organisational success.

Figure 1:



Material and Methods

This study explores the relationship between Emotional Intelligence and organisational commitment among employees of DSI Company. Emotional Intelligence is evaluated using Goleman's mixed model, which includes four key indicators: self-awareness, self-management, social awareness, and relationship management. To measure organisational commitment, the study employs Meyer and Allen's three-component model, which consists of affective commitment, continuance commitment, and normative commitment.

A quantitative research design is adopted for this study. Data were collected through structured questionnaires distributed to a sample of 100 bottom-level employees, selected from the entire population of DSI Company employees. The selection ensures a representative sample for reliable results. The collected data were then analysed using SPSS (Statistical Package for the Social Sciences) software. This software facilitates comprehensive statistical analysis, enabling the researcher to examine the relationships between different dimensions of Emotional Intelligence and various aspects of organisational commitment. The study aims to identify the specific dimensions of Emotional Intelligence that most significantly influence employee commitment, providing insights for organisational development and employee training programmes.

Results and Discussion

Demographic Characteristics of Respondents

Figure 2:

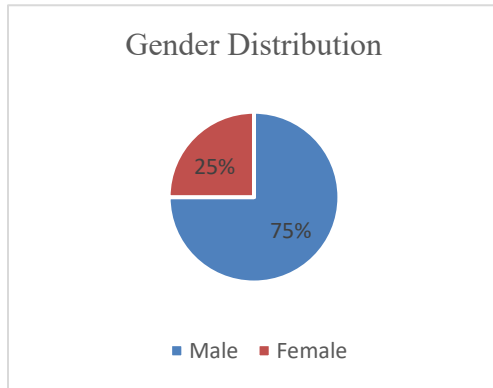


Figure 3:

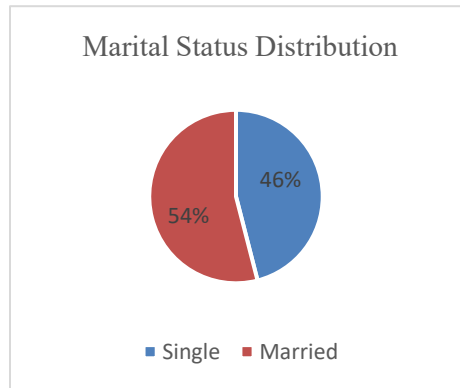


Figure 4:

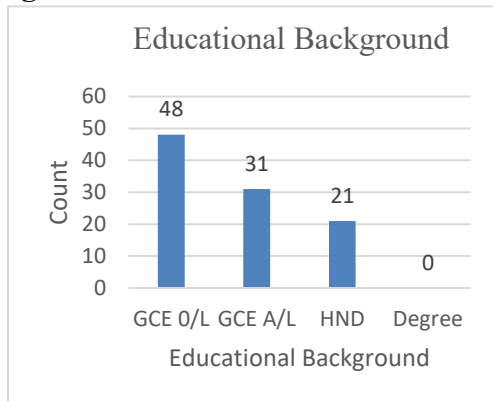


Figure 5:

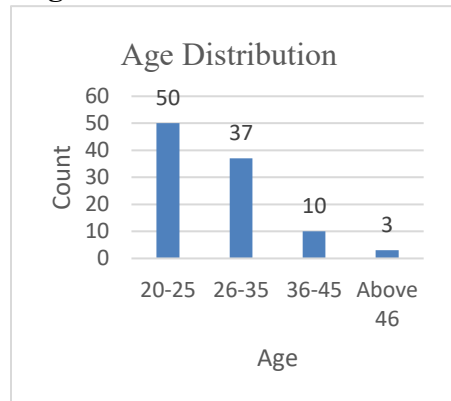
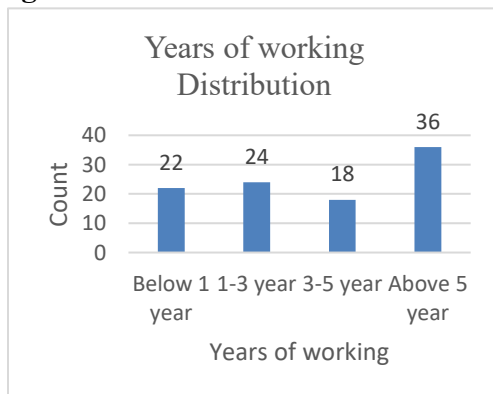


Figure 6:



Descriptive Statistics

Table 1:

Descriptive Analysis for the Independent Variable

	Mean	Std. Deviation
SA	3.7667	.50475
SM	3.9433	.45519
SAW	3.9433	.57258
RM	4.0863	.42961

Source: SPSS Output

The mean scores for the dimensions of Emotional Intelligence – self-awareness (3.77), self-management (3.94), social awareness (3.94) and relationship management (4.09) – indicate that employees generally believe they possess these skills. The analysis revealed a positive relationship between Emotional Intelligence and organisational commitment. Employees with higher levels of EI are more committed to the organisation. The standard deviations (0.50475 for self-awareness, 0.45519 for self-management, 0.57258 for social awareness, and 0.42961 for relationship management) indicate that responses are consistent and clustered tightly around the mean.

Table 2:

Descriptive Analysis for the Dependent Variable

	Mean	Std. Deviation
OC	3.8439	.35600

Source: SPSS Output

According to Table 2, in terms of organisational commitment that implies, the mean value of organisational commitment was 3.8439 and the value can deviate from 0.35600. Since the mean value was between the range of $3.5 \leq X < 5$, it discovered that employees almost agree with organisational commitment and the standard deviation is 0.35600.

Correlation Coefficient Analysis

Table 3:

Correlation between SA and OC

	Correlation	SA	OC
SA	Person Correlation	1	.550
	Sig. (2-Tailed)		.000
	N	100	100
OC	Person Correlation	.550	1
	Sig. (2-Tailed)	.000	
	N	100	100

Correlation is significant at the 0.01 level (2-tailed)

Source: SPSS Output

According to Table 3, the correlation between self-awareness and organisational commitment was 0.550. It denoted that there is a strong positive linear relationship between independent and dependent variables. In addition, the significance of P-value was at zero level ($0.000 < 0.01$). Hence, it has been supported for the relationship. Therefore, it rejects the null hypothesis (H_0) and accepts the alternative hypothesis (H_1) at a 99% confidence level. Hence, there is a significant positive relationship between Emotional Intelligence and organisational commitment.

Table 4.

Correlation between SM and OC

Correlation			
		SM	OC
SM	Person Correlation	1	.786
	Sig. (2-Tailed)		.000
OC	Person Correlation	.786	1
	Sig. (2-Tailed)	.000	

Correlation is significant at the 0.01 level (2-tailed)

Source: SPSS Output

According to Table 4, the correlation between self-management and organisational commitment was 0.786. It denoted that there is a strong positive linear relationship between the independent and dependent variables. In addition, the significance of P - value was at zero level ($0.000 < 0.01$). Hence, it has been supported for the relationship. Therefore, it rejects the null hypothesis (H_0) and accepts the alternative hypothesis (H_1) at a 99% confidence level. Hence, there is a significant positive relationship between Emotional Intelligence and organisational commitment.

Table 5:

Correlation between SAW and OC

Correlation			
		SAW	OC
SAW	Person Correlation	1	.772
	Sig. (2-Tailed)		.000
OC	Person Correlation	.772	1
	Sig. (2-Tailed)	.000	

Correlation is significant at the 0.01 level (2-tailed)

Source: SPSS Output

According to Table 5, the correlation between social awareness and organisational commitment was 0.772. It denoted that there is a strong positive linear relationship between independent and dependent variables. In addition, the significance of P-value was at zero level ($0.000 < 0.01$). Hence, it has been supported for the relationship. Therefore, it rejects the null hypothesis (H₀) and accepts the alternative hypothesis (H₁) at a 99% confidence level. Hence, there is a significant positive relationship between Emotional Intelligence and organisational commitment.

Table 6:

Correlation between RM and OC

Correlation			
		SA	RM
RM	Person Correlation	1	.794
	Sig. (2-Tailed)		.000
OC	Person Correlation	.794	1
	Sig. (2-Tailed)	.000	
Correlation is significant at the 0.01 level (2-tailed)			

Source: SPSS Output

According to Table 6, the correlation between relationship management and organisational commitment was 0.794. It denoted that there is a strong positive linear relationship between the independent and dependent variables. In addition, the significance of P-value was at zero level ($0.000 < 0.01$). Hence, it has been supported for the relationship. Therefore, it rejects the null hypothesis (H₀) and accepts the alternative hypothesis (H₁) at a 99% confidence level. Hence, there is a positive relationship between Emotional Intelligence and Organisational Commitment. Therefore, Relationship Management plays an important role in Emotional Intelligence that influences the organisational commitment of employees in DSI Company.

Conclusion and Recommendations

The study demonstrates that EI significantly affects organisational commitment among employees at DSI. Higher levels of self-awareness, self-management, social awareness, and relationship management are linked to greater employee commitment, with relationship management being the most influential dimension. These findings suggest that DSI should invest in EI development programmes to boost employee engagement and organisational success.

For future researchers, it would be valuable to examine the long-term effects of EI training on employee commitment in various sectors. Policymakers

should consider integrating EI training into workplace development initiatives to improve employee relationships and satisfaction.

This research highlights that while EI is acknowledged for its benefits, its specific impact on organisational commitment in Sri Lanka is less explored. By focusing on DSI this study provides new insights into how different EI dimensions influence employee commitment, offering practical recommendations for improving human resource practices in the retail sector.

References

Caruso, D. R., Salovey, P., Brackett, M. A., & Mayer, J. D. (2017). The ability model of emotional intelligence: Principles and updates. *Emotion Review*, 9(4), 290-300. <https://doi.org/10.1177/1754073917712017>

Goleman, D. (1998). *Working with emotional intelligence*. Bantam Books.

Mayer, J. D., Salovey, P., & Caruso, D. R. (2000). Emotional intelligence as zeitgeist, as personality, and as a mental ability. In R. Bar-On & J. D. A. Parker (Eds.), *The handbook of emotional intelligence* (pp. 92-117). Jossey-Bass.

Van der Heijden, B. I. J. M., Scholarios, D., Bozionelos, N., Van der Schoot, E., & Epitropaki, O. (2004). Career success in a boundaryless career world. *Journal of Organizational Behavior*, 25(6), 633-656. <https://doi.org/10.1002/job.264>

Wright, T. A., & Cropanzano, R. (2000). Psychological well-being and job satisfaction as predictors of job performance. *Journal of Occupational Health Psychology*, 5(1), 84-94. <https://doi.org/10.1037/1076-8998.5.1.84>

NATIONAL INTERESTS AND POLICY FORMATION: AN ANALYTICAL STUDY OF GREEK-PERSIAN DIPLOMACY DURING THE PELOPONNESIAN WAR

C.T.S.S. Perera^{1*}

¹*Department of Western Classical Culture and Christian Culture, University of Kelaniya*

Abstract

The Greek historians Herodotus and Thucydides reveal complicated diplomatic and military relations between Greece and Persia before the conquests of Alexander the Great. They relate how the historical encounters of Greece and Persia shaped the governmental policies of Greek city-states, during the Persian Wars (499-449 BCE) and the Peloponnesian War (431-405 BCE). By analysing these primary records of diplomatic relations, the research reveals how ancient Greek city-states extended alliances and enmities based on strategic advantages. A historical method under a qualitative framework is used for the research and it aims to highlight the primacy of national interest in guiding foreign policy decisions of a nation. The findings and analysis contribute to a deeper understanding of ancient diplomatic complexities and emphasise the enduring relevance of national interest in international relations. The findings reveal ancient policy formulation and the influential dynamics of ancient Greek-Persian diplomacy for contemporary appraisal.

Keywords: *Foreign Policies, Greece, National Interest, Peloponnesian War, Persia*

**Corresponding author: Tel.: +94 (71) 6176960; Email: sathsi.perera@gmail.com;
<https://orcid.org/0009-0005-4334-6874>*

Introduction

Ancient Greece and Persia were distinct civilisations that developed in Europe and Western Asia, respectively. The historical dynamics between Ancient Greece and Persia before the rise of Alexander the Great in 323 BCE portray complex and discerning diplomatic and military engagements that shaped the international relations in the Mediterranean Sea. The conquests of Alexander unified Greece and Persia under the Macedonian Empire, but prior to this unification, Greece and Persia evolved as separate nations that maintained contact since prehistoric times.

City-states of ancient Greece functioned as independent political entities. Each city-state had its own government, legislation, and distinct lifestyle, while Persia was ruled by an emperor and stood as a powerful empire. The rivalry between these two powers came to a climax in 499 BCE with the outbreak of the Persian Wars, a series of conflicts that persisted even after the Greek triumph over Persia in 449 BCE. The main focus of the current study was to identify the impact of the national interest of each country involved in the diplomatic policies of a nation.

Material and Methods

The literary records of classical Greek historians, Herodotus (485-425 BCE) and Thucydides (460-404 BCE) served as primary sources, offering detailed accounts of the Persian and Peloponnesian Wars. Herodotus, the 5th century historian goes back to the mythical ages to find the long-lasting enmities that had occurred between ancient Greece and Persia. Thucydides records on the causes, incidents, and the implications of the Peloponnesian War. Their narratives have depicted varied historical instances giving insights into how national interests influenced the diplomatic and military strategies of the Greek city-states.

A historical method within a qualitative research framework is employed to identify the related instances for the analysis. Historical references to continuous relations between the two nations were analysed to understand the national interest of each nation and how that interest affects the policy formation of the country. Primary sources were mainly incorporated to uncover the interplay of national interests and policy formulation. These unwritten codes of conduct underscore the primacy of national interest in guiding governmental actions and foreign policies. Further, an eclectic method was adopted to identify the current discussion on the matter.

Results and Discussion

Herodotus in the Histories records the history of the Ionians, the twelve Greek cities on the West coast of Asia Minor in the Persian border (Herodotus, Histories, 1.141-143). Persia seized control of the cities of Ionia in c. 540 BCE. Following this, Persian tyrants, appointed by the Persian satrap in Sardis, governed them. Ionian cities reached out to Greece seeking help. As a result, all Greek city-states led by Sparta fought against Persia. The Greek victory mainly supported by the last few victories by the Athenians caused several social and political changes in Greece. As mentioned earlier, Greece was a nation consisting of individual city-states which had independent governments. Except for the common language and religion, each city-state functioned under its unique governmental policies and administrations. Sparta, a military state, led all Greek forces including Athens during the Persian Wars. However, the final victories of the Greeks in the Persian wars are credited to the naval powers of Athens. In addition, the conspiracy of the Spartan General Pausanias with the Persian King, made the Ionians reject the Spartan power and request Athens for protection (Herodotus, 5.32, Thucydides, 1.128). This marks an important turning point in Greek history as the Athenian acceptance of the Ionian request led to the formation of the Delian League with the Ionian states and Athens as the leader (Thucydides, 1.96). Eventually, the Delian League gave Athens more power and wealth to develop into an Empire by the 5th century BCE. These incidents created a chaotic political situation in Greece.

The power balance, among the independent Greek city-states, was threatened by the growing power of Athenian Imperialism. This mainly affected Sparta. After losing the 'traditional dominance' in Greece, Sparta was waiting for a moment to crush down the Athenian empire. Discontented Ionian allies requested Sparta to control Athens. Parallely, Athens had started to suppress the allied states into subject allies. Sparta joined by many other Greek city-states declared war against the Athenian Empire (Thucydides, 1.66-88). This incident is considered the greatest outbreak of an internal war in Greek history.

The events that happened during the Peloponnesian War exemplify how the national interest of a country directly affected its government policies. Athenian Empire threatened by the united power of Sparta, decided to request the help of Persia to fight against the other Greek city-states (Thucydides, 8.18). Persia agreed and in return demanded the authority of the Ionian states. The Athenians had to turn down the Persian demand as they were bound to protect the Ionian states under the Delian League, and they belonged to Ionian origin. This incident reveals several significant factors related to ancient

foreign relations. Athens developed into an Empire as a result of the consequences of the Persian Wars. Persia was the common enemy of Greece. Athens went into the measures of establishing the Delian League as a precautionary step from any future threats from Persia. However, the internal situation of Greece made Athens request the help of Persia irrespective of the rivalry they had a few years back. As mentioned earlier, Polly Low states how ancient countries in the Mediterranean Sea developed foreign relations without a written code of law. There were no written agreements or constitutions on foreign policies in ancient times. They made decisions depending on the needs and requirements of the current situation of a country proving the impact of national interest over governmental decisions. The above statement is further proven in the Spartan decision to request the Persian help after Athens. Soon after Athens turned down the Persian demand at her request, Sparta requested Persia for help to crush down the powers of the Athenian Empire. Persia, seeking an opportunity to conquer Greece, agreed to the Spartan request but with the same demands. Sparta which did not have any bond with the Ionian states like the Athenians, agreed to give the authority of the Ionian states to Persia. These requests and the agreements reveal the methods of interacting with foreign nations under an unwritten code of law during ancient times.

Conclusion and Recommendations

The aforementioned historical events depict how governmental decisions could be amended depending on a country's current situation and requirements. During the Persian Wars, both Athens and Sparta made a united front to protect Greece and the Ionian islands from Persia. After that, the Delian League which elevated the status of Athens into an Empire, overpowered the Ionians and turned them against Athens creating an internal war in Greece. This made Athens and Sparta rivalries. Both city-states requested the help of Persia irrespective of the earlier antagonism. Persia agreed to both requests depicting their interest to overpower Greece at the given opportunity and demanded the authority of the Ionian islands. However, Athens disagreed as per their liability to protect the Ionians while the Spartans agreed as their interest was to crush Athens and no bond towards to the Ionians. Each state showcases its own interests and stability during this chaotic time. In consideration of that, they disregard previous animosities and consider merely the current requirements and needs. In conclusion, the ancient Greek foreign diplomacies with Persia during the Peloponnesian War exemplify the impact of national interest on government policies in ancient times and set examples for modern diplomatic alliances.

References

Boardman, J., Edwards, I. E. S., Sollberger, E., & Hammond, N. G. L. (1992). *The Cambridge Ancient History* (Vol. 3). Cambridge University Press.

Friedman, D. (2014). *Spartan foreign policy and military decline 404-371 BC*.

Meiggs, R. (1972). *The Athenian Empire*. Clarendon Press.

Strauss, B. (2020, July 21). Duality, determinism and demography: The Greeks on geopolitics. *Engelsberg Ideas*. <https://engelsbergideas.com>

Terpstra, T. (2019). *Trade in the ancient Mediterranean: Private order and public institutions*. Princeton University Press.

TRACK 05
LANGUAGE, LINGUISTICS, LITERATURE AND
CULTURE

PLENARY SPEECH

Language Universals and Linguistic Typology

Prof. Yoko Nishina

Hiroshima University, Japan



The study of language universals and linguistic typology are interconnected areas of linguistics that aim to understand and categorise the world's languages by exploring their shared features and systematic differences. This broad field provides crucial insights into human cognition, language structure, and linguistic variation.

Language universals are features or properties that are consistent across all human languages or are found in a statistically significant number of languages. These universals can manifest as strong tendencies and correlations. Linguists study such universals to identify what aspects of language are biologically or cognitively determined and what might be contingent on historical, social, or environmental factors.

Linguistic typology is a branch of linguistics that aims to explain linguistic phenomena functionally by generalising linguistic universals behind the diversity of the world's languages through broad observation. It differs in methodology from comparative linguistics, which compares languages historically to clarify their genetic affiliation. Linguistic typology classifies languages according to their structural features. Languages that are not genetically or geographically related can be very similar typologically. Typology seeks to classify and analyse languages based on their syntactic, morphological, and phonological characteristics.

Linguistic typology is a field of linguistics that identifies the possible variations of human languages through a crosslinguistic observation of the world's languages. There are concepts that people using a language try to express, but how they express varies from one language to another. The study of language universals and linguistic typology deal with the invariants of language on the one hand and variants of languages on the other.

Hierarchies and Implication

In the study of linguistic typology, two key concepts—hierarchy and implication—play crucial roles in understanding crosslinguistic patterns and constraints.

A hierarchy in linguistic typology refers to an ordered ranking of elements or structures that reflects their distribution and function across languages. These hierarchies often indicate which elements are more likely to occur under certain linguistic conditions, and they can provide insights into language universals by highlighting preferred structures or grammatical patterns.

One example is the animacy hierarchy, which reflects a biologically and cognitively grounded distinction:

1. humans > animals > inanimate objects.

This hierarchy primarily influences grammatical patterns such as case marking: Animate objects are more likely to be explicitly marked with the case than inanimate objects (e.g., differential object marking in languages like Malayalam, Hindi, or Spanish).

The empathy hierarchy is closely related:

2. speaker > addressee > 3. person (humans) > animals > inanimate objects (individual > mass > place > proposition etc.).

The participants of a speech act (= speaker and hearer) are higher on the hierarchy, reflecting their centrality in communication. Living beings, especially humans, are more likely to elicit empathy than non-living objects, influencing word choice and grammatical constructions.

In some languages, word order or case marking may favor more empathically prominent entities. For instance, in Japanese, the use of topic markers and honorifics can reflect the empathy hierarchy, elevating the addressee or speaker's perspective.

This hierarchy highlights the interplay between grammar, cognition, and social interaction, showing how linguistic structures are shaped by human tendencies to empathise with certain entities over others.

Another example is the hierarchy of syntactic functions, which refers to ranking grammatical relations within a sentence, typically based on their prominence or accessibility in linguistic processes such as agreement, relativisation, or passivation. For example, in Tagalog, Indonesian, or Malagasy, only the subject in the hierarchy's highest position can be relativised to form a relative clause. This hierarchy reflects how languages treat different syntactic functions regarding priority or markedness. Common hierarchy of syntactic functions:

3. subject > direct object > indirect object > oblique argument > adjunct.

The hierarchy of syntactic functions correlates to the hierarchy of animacy.

For instance, in many languages, the subject of a sentence tends to be higher on the animacy hierarchy than the object (e.g., The boy chased the dog is more typical than the dog chased the boy, all other factors being equal).

Implication (or implicational universals) refers to conditional rules about language structures where the presence or absence of one feature predicts the presence or absence of another feature. These implications often take the form of "If X, then Y," providing a predictive relationship between typological features.

An example of an implicational universal is: "If a language has a dual number (for indicating exactly two items), then it also has a plural."

This implication reflects a pattern observed across many languages, where the existence of a more marked grammatical category (dual) implies the existence of a less marked category (plural). Such implications can also apply to syntactic structures, phonological rules, and morphological features, revealing systematic dependencies.

The hierarchies mentioned above are also implicational. For example, if a language can form a relative clause by relativizing on indirect objects (the friend I lent the book), then the relativisation on both direct objects and subjects is possible. (Keenan & Comrie 1977)

Hierarchy and implication demonstrate how the world's languages adhere to common structural constraints and preferences. Hierarchies reflect ranked distributions, and implications reveal predictive relationships. Together, they shape the typological landscape and contribute to our understanding of linguistic universals and variation.

Language universals and linguistic typology provide profound insights into the shared features and diversity among human languages. By exploring these patterns, we deepen our understanding of human cognition, cultural history, and the essence of human language.

"Enabling the Future through Resilience, Social Stability, and Ecological Sustenance"

Studying language universals and linguistic typology contributes significantly to the conference theme "Enabling the Future through Resilience, Social Stability, and Ecological Sustenance." By uncovering shared linguistic features, language universals foster resilience through the preservation of endangered languages and the promotion of mutual understanding across cultures. Linguistic typology highlights the structural diversity of languages, enabling cross-cultural communication and reducing linguistic bias, which supports social stability. Furthermore, many indigenous languages encode

unique ecological knowledge critical for sustainable practices, and their documentation through linguistic research helps protect both cultural heritage and environmental wisdom. Together, these studies provide a framework for addressing global challenges by emphasising the importance of linguistic and cultural diversity in shaping a sustainable and stable future.

18 December 2024

FROM ACTION STAR TO ABSURDITY: A SEMIOTIC INVESTIGATION OF THE “CHUCK NORRIS” INTERNET PHENOMENON AS A SOURCE OF MEMES

A. P. B. Athapaththu^{1*}

¹ *Department of English Language Teaching, Faculty of Humanities, University of Kelaniya*

Abstract

This paper presents the findings of a semiotic study that explores the transformation of an action movie star and martial artist into an internet phenomenon and a source of memes. A meme pool consisting of 100 memes collected from a Facebook meme repository named Chuck Norris Jokes and Facts constitutes the raw data of this study. The collected memes were analysed using critical discourse analysis to explore the communicative potential of the selected memes while operating within the theoretical framework of Peircean semiotics to analyse the visual and textual elements. The findings reveal the juxtaposition of visual and textual elements from various genres. The constructed memes reverse fictional narratives coming from multiple entertainment sources. Individualised storytelling is also used in the form of contrafactive cause-and-effect links to a significant extent. In addition, the humorous exaggeration of physical capabilities and the demotion of superhero characters were found to have assigned a sense of hypermasculinity to Chuck Norris. It has eventually resulted in the conceptualisation of Chuck Norris as an internet phenomenon, which is now increasingly used as an ideological tool to contradict physical phenomena and reverse fictional narratives found within various media genres. The study lends ideas for future research directed at exploring the capacity of memetic content to promote the ideological practices of networked communities.

Keywords: *Ideological Tool, Internet Phenomenon, Memes, Semiotics, Networked Communities*

**Corresponding author: Tel.: +94 (71) 2199235; Email: apbat231@kln.ac.lk;
<https://orcid.org/0009-0007-2184-1879>*

Introduction

Today's digital landscape and its culture have been shaped to a significant extent by the activities of internet users. This is mainly due to the increased "human interaction with the internet" (Wiggins, 2019, p. 1), particularly due to the active participation of internet users in the creation of memes and their eventual dissemination on the internet. The spread of this user-generated content on interactive internet-based platforms brings the current Web 2.0 society into the spotlight, prompting researchers to investigate the changing nature of the behaviours of online communities. As internet memes are powerful cultural artefacts that mirror the behavioural and ideological practices unique to networked internet communities and as they use memes to "simultaneously express both their uniqueness and their connectivity" (Shifman, 2014, p.30), it is possible that a close examination of such memes has the capacity to contribute to the understanding of digital cultures.

Input for this research study stems from the increased presence and circulation of memes on an interactive Facebook group specifically created for the purpose of making memes using various image macros of Chuck Norris. It was this transformation of an action movie star into a source of online humour that prompted the researcher to explore the creative mechanisms involved in the creation of memes, the reasons for the construction of such memes, and what those memes reveal about the ideology and behaviours of their makers.

The rationale for the selection of a meme pool as the unit of analysis on Facebook can be further justified by considering a reference made to digital culture by Wiggins (2019), according to whom it (digital culture) now operates "using social media as the primary form of interaction with other human beings" (ibid. p. 21) as they have, according to Jenkins (2009) "relatively low barriers to artistic expression and civic engagement, strong support for creating and sharing one's creations, and some type of informal mentorship whereby what is known by the most experienced is passed along to novices" (ibid. p. 3). It is on these premises that this study finds the origin of its research problem and significance as it aims to contribute to the current literature on netnographic research with the primary objective being understanding the creative and ideological dispositions of the observed online community.

Material and Methods

This semiotic study has a qualitative research design in which a meme pool consisting of 100 purposively sampled memes was collected from a Facebook group named Chuck Norris Jokes and Facts. The collected memes were analysed using Critical Discourse Analysis (CDA) while operating within the

theoretical framework of Peircean semiotics and works of Barthes (1977)¹, the main reason for which internet memes should be understood as identical to the semiotic sign (Blommaert, 2015; Cannizzaro, 2016; Wiggins, 2019). Considering the suggestions made by Merriam (1998) and Kekeya (2016) in terms of qualitative data analysis techniques, the data analysis process of this study also involved an iterative approach in which the researcher moved back and forth repeatedly on the data to derive meaningful interpretations.

¹Peircean Semiotics refers to the works of C.S. Peirce whose theory of Semiotics claims that a sign consists of three inter-related elements: a sign, an object, and an interpretant. Barthes (1977) expanded Semiotics to include images and other non-verbal communication.

Results and Discussion

Visual and textual juxtaposition

The data analysis led to a number of memes created by amalgamating visual and textual elements extracted from various media genres. This creative enterprise has eventually resulted in the establishment of a link between the combined elements with a unique semantic content attached to the newly created meme.

Figure 1:

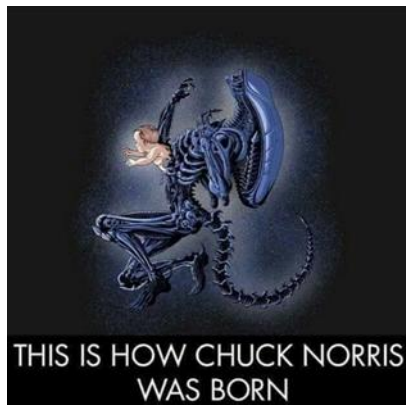


Figure 1 shows an image macro of Chuck Norris amalgamated with the image of a building on which the name “HOTEL CALIFORNIA” is inscribed. On the top of the image appears a caption which reads, “After Killing the Beast, Chuck Norris left.” The “killing the beast” part is originally from the lyrics of a song performed by the American rock band Eagles in which it says, “they

just can't kill the beast” (Felder, Frey, and Henley, 1976, track 1). The two elements have been combined to create the effect that only Chuck Norris is capable of beating the “beast” the Eagles says “they can't”. The newly created meme reveals a remarkable degree of intertextuality in which the combined elements equally contribute to form a single semantic unit.

Reversal of fictional narratives

Figure 2:



The data analysis also revealed images manipulated with captions referring to Chuck Norris to a significant extent to create a total reversal of fictional narratives found across various sources of entertainment. Figure 2 shown below is an image macro meme which depicts a human baby, instead of a chest buster (Scott, 1979) coming out of the chest of a grown-up alien creature. The text superimposed underneath the image macro reads, “THIS IS HOW CHUCK NORRIS WAS BORN.” The reversal effect has been so effective because it is actually from human chests that alien creatures emerge, according to the movies. This reversed narrative suggests that only Chuck Norris would have been born out of an alien creature.

Individualised Storytelling

The meme pool also contains miniature contents in which storytelling has been employed as a creative mechanism to generate memes. These memes establish contrafactive cause-effect relationships that intentionally contradict established truths. This is evident in Figure 3 and Figure 4.

Figure 3:



Figure 4:



Figure 3 refers to the birth of the giraffe as a direct result of Chuck Norris's uppercut punch to the chin of a horse whereas Figure 4 refers to parents moving out once Chuck Norris turned eighteen.

Demotion of Fictional Superheroes

Figure 5:



The data analysis also reveals the portrayal of Chuck Norris to create an

alternative fictional reality by intentionally demoting selected superhero characters. The image macro provided in Figure 5 depicts a demoted version of The Incredible Hulk (Leterrier, 2008) asking “master Chuck” to return his “trousers”. The two captions superimposed on the top and at the bottom of the manipulated image add a submissive tone to the request. This depopularization effect, which originates from humorous exaggerations of human capabilities, attributes a sense of hypermasculinity to Chuck Norris.

Spreading humour through absurdity invented using exaggerations directly referenced to Chuck Norris was found to be the main communicative function of the memes analysed in this study. This creative enterprise exercised through various visual and text juxtaposition strategies has resulted in the conceptualisation of Chuck Norris as an internet phenomenon. This conceptualised memetic narrative is now increasingly used as a digitalised ideological tool to contradict physical phenomena as well as to reverse fictional narratives emanating from a variety of visual and textual genres. This process of Chuck Norris becoming a conceptualised internet phenomenon is still at its saturation stage as the members of the selected meme repository continue to interact with the phenomenon and share the generated memes with their intended social media audience.

Thus, from a martial arts icon to the source of online absurdity, Chuck Norris has undergone a significant transformation in the digital culture. While his action-hero persona initially earned him respect, social media captured the exaggerated nature of his on-screen exploits, artistically producing a significant amount of internet humour. These humorous exaggerations, often based on absurd propositions and counterfactual narratives, found endless amusement in portraying Chuck Norris as an invincible, all-powerful being. The "Chuck Norris" meme phenomenon therefore highlights the ability of the current participatory culture to facetiously deconstruct cultural icons and transform them into a source of humour and shared amusement.

Conclusion and Recommendations

Due to the dynamic nature of current digital culture, an attempt to achieve a comprehensive understanding of it can be a challenging endeavour. However, as defined by Hall (1997), culture is about the “production and exchange of meanings—the ‘giving and taking of meaning’—between the members of a society or group... Thus, culture depends on its participants interpreting meaningfully what is around them and ‘making sense’ of the world in broadly similar ways” (ibid. p. 2). An attempt to understand the digital cultural phenomenon can be supplemented by the artefacts that its members produce

and the unique meanings they attach to them. Among these cultural artefacts are the user-generated memetic contents produced by the members of internet-based communities. These cultural artefacts enable researchers to explore the complicated internet phenomena that arise from the activities of what Kearney (2019) identifies as “networked communities and publics” (ibid. p. 1) active on the internet. Thus, this paper has presented the findings of a qualitative study conducted in order to find possible reasons for the transformation of a once-action movie star and martial artist into an internet phenomenon, providing a source for a range of memetic contents. The findings of this study lend ideas for future research directed at understanding the capacity of memes to reveal the ideological dispositions of the residential netizens of the Web 2.0 society.

References

- Barthes, R. (1977). *Image, music, text*. Fontana.
- Blommaert, J. (2015). Meaning as a nonlinear effect: The birth of Cool. *Theory in Applied Linguistics Research: Critical Approaches to Production, Performance, and Participation*, 28(1), 7–27. <https://www.jbe-platform.com/content/journals/15705595/28/1>
- Cannizzaro, S. (2016). Internet memes as internet signs: A semiotic view of digital culture. *Sign Systems Studies*, 44(4), 562–586. <https://doi.org/10.12697/sss.2016.44.4.05>
- Felder, D., Frey, G., & Henley, D. (1976). *Hotel California*. On *Hotel California*. Asylum.
- Hall, S. (1997). *Representation: Cultural representations and signifying practices*. Sage.
- Jenkins, H. (2008). *Confronting the challenges of participatory culture: Media education for the 21st century*. The MIT Press.
- Kearney, R. (2019). Meme frameworks: A semiotic perspective on internet memes. *Video Journal of Education and Pedagogy*, 4(2), 82–89. <https://doi.org/10.1163/23644583-00401013>
- Kekeya, J. (2016). Analysing qualitative data using an iterative process. *Contemporary PNG Studies*, 24, 86–94.
- Leterrier, L. (2008). *The Incredible Hulk*. Marvel Studios and Valhalla Entertainment.

Merriam, S. B. (1998). *Qualitative research and case study applications in education*. Jossey-Bass.

Scott, R. (1979). *Alien*. Brandywine Productions.

Shifman, L. (2014). *Memes in digital culture*. MIT Press.

Wiggins, B. E. (2019). *The discursive power of memes in digital culture: Ideology, semiotics, and intertextuality*. Routledge.

BEYOND BLACK AND WHITE: A LITERARY EXPLORATION OF RACIAL FABRICATION IN ABSALOM, ABSALOM! AND INVISIBLE MAN

M. M. Marasinghe^{1*}

¹ *Department of Human Resource Management, University of Kelaniya*

Abstract

Though often presumed a biological reality, racial categorisation is deeply rooted in hegemonic discourse and power structures. This study examines how William Faulkner's *Absalom, Absalom!* and Ralph Ellison's *Invisible Man* interrogate the ways in which White hegemonic subjectivity wields discourse to frame Black subjectivity as the anarchic semiotic to their 'refinement' and 'order.' Faulkner's narrative illustrates the laborious efforts of White American subjectivity to sustain illusory racial distinctions, while *Invisible Man* reveals the complexities of Black self-articulation amid discursive imposition. In both texts, moments of slippage and disruption challenge the stability of racial archetypes, exposing the limits of hegemonic discourse over Black subjectivity. By applying Julia Kristeva's theory of the semiotic and the symbolic, this study examines the configuration of racial identity in *Absalom, Absalom!* and *Invisible Man*. Recognising the contrived nature of racial identity, the study underscores the need to deconstruct cultural narratives to foster a more equitable society.

Keywords: *Discourse, Identity Construction, Otherness, Race, Stereotypes*

**Corresponding author: Email: shakyamarasinghe@gmail.com*

Introduction

Racist discourse has played a pervasive role in shaping cultural narratives and social dynamics throughout American history. Even presently, White American subjectivity, in the ceremonious exaltation of racial archetypes, continues its crusade against those whom it deems ‘animalistic’, ‘hypersexual’, and ‘belligerent’. In 2020, George Floyd, falsely suspected of using counterfeit money, was suffocated to death in police custody. In 2023, Nani Finlayson was shot dead by the police officers whom she believed would offer her succour from domestic abuse. Their tales echo those of numerous others who have been and continue to be racially (even fatally) typecast and sacrificed to assuage the racial anxieties of the dominant White paradigm. Such is the racially-charged socio-political landscape of contemporary America.

Under sustained theoretical scrutiny, racial identity proves to be a fabrication perpetuated by White hegemonic discourse. By analysing William Faulkner’s *Absalom, Absalom!* and Ralph Ellison’s *Invisible Man*, this study postulates racial alterity as a product of racial ventriloquism, wherein White Subjectivity articulates Black subjectivity to be anti-culture and anti-reason, exalting itself as the pillar of Western civilisation. Faulkner’s narrative chronicles Thomas Sutpen’s quest to establish a White dynasty based on fictitious racial supremacy, whilst *Invisible Man* depicts a Black man’s pursuit of racial legitimacy in 1950s America, amidst a web of derogatory racial archetypes. This analysis dismantles the discursive scaffolding of racial identity, laying bare the subsequent cultural abnegation inflicted upon those it shuns.

Material and Methods

The analytical scope of this study is delimited to the primary texts, *Absalom, Absalom!* and *Invisible Man*. Toni Morrison’s *Playing in the Dark*, examines how Whiteness defines itself by repudiating Blackness and projecting onto Black subjectivity, traits it disavows within itself (Morrison 1992). Further, this study engages with Julia Kristeva’s *Revolution in Poetic Language* where language is bifurcated into the symbolic and the semiotic (Kristeva, 1984, p. 24). The symbolic realm denotes the patriarchal structures of “grammatical and social constraint” (Roudiez, 1980, p. 7) underpinning social order, whilst the semiotic embodies primal, pre-linguistic drives and desires. Kristeva contends that the symbolic order, whilst ostensibly stable, maintains itself by negating the semiotic, and perennially fears the erosion of discursive distinctions (Kristeva, 1984, p. 62). Analogous to Morrison’s hermeneutics, Kristeva’s framework facilitates the interrogation of racial stereotypes as

contingent constructs of historical and cultural discourses. By amalgamating both hypotheses, this study examines how White subjectivity in both narratives affirms its spurious alignment with culture, reason, and authority whilst framing Black subjectivity as the savage, hyper-sexual semiotic.

Results and Discussion

Faulkner's *Absalom, Absalom!* spins a fragmented, mythopoeic narrative of the corrosive influence of racial prejudice on both individual and collective consciousness in the South. The narrative unfolds with Rosa Coldfield, a vestige of the Southern past, recounting the saga of Thomas Sutpen and his unyielding resolve to construct an imperishable White dynasty—an ode to the White-governed symbolic, where the non-White perpetually exists as the ignoble semiotic.

White-imposed discursive violence shapes Black subjectivity throughout the novel. To illustrate, by christening his mulatto daughter 'Clytie' after Clytemnestra, Sutpen imposes a mythic narrative of treachery upon her. Tellingly, Sutpen "named (the slaves) all himself" (Faulkner, 1951, p. 34). Hence, under his dominion, racial alterity is unequivocally ventriloquized as the lawless semiotic. Similarly, a slave in "Christian clothing" (Faulkner, 1951, p. 15) is merely a "performing tiger" (Faulkner, 1951, p. 15) to Rosa. This dynamic extends to Mr. Compson's narrative, where he delineates Sutpen's illegitimate mulatto son, Charles Bon, as the disruptive semiotic menacing the symbolic order. Despite Bon's apparent Whiteness, his 'base' racial origins are deemed evident in his purported libertine penchant for "whores and...champagne" (Faulkner, 1951, p. 156).

Moments of discursive collapse, however, prove inevitable. At one point, Clytie breaches the White-Black divide by touching Rosa's flesh and momentarily shatters "the eggshell shibboleth of caste and colour too" (Faulkner, 1951, p. 74). Seeking to repudiate their ontological sameness, Rosa resorts to the venomous epithet, "nigger" (Faulkner, 1951, p. 74). Similarly, though Henry, Sutpen's heir shoots Bon on his wedding day to his sister, Judith, in a bid to prevent the dissolution of racial distinctions, the violence proves futile. The sole remnant of Sutpen's bloodline is a mulatto descendant, neither White nor Black, underscoring the tenuousness of fabricated differences.

Set in the racially chequered America of the 1950s, *Invisible Man* illustrates the protagonist's struggle with the suffocating invisibility that shrouds the Black experience. Burrowed in a basement, *Invisible Man* (henceforth I.M.) recounts his attempts to breach the White-dominated symbolic and carve out

a self-inscribed identity.

As a high school graduate, I.M. confronts his role as the ventriloquized semiotic during his valedictorian speech to the town's elite. His attempt to transcend the symbolic sphere falters when a nude blonde woman, adorned with an American flag across her navel, is paraded to elicit a carnal response and reinforce the myth of Black phallic potency. This spectacle highlights the White denial of sameness, revealing that despite I.M.'s efforts to embody White civility, he remains fundamentally excluded from the symbolic order: "There was still laughter as I faced them" (Ellison, 2002, p.24). However, the semiotic elements that Whiteness seeks to deny within itself are manifest in the violence that permeates their language: "Let me at those black sonsabitches!" (Ellison, 2002, p.17).

I.M.'s quest for cultural capital through scholarship is further quashed upon realising that Black universities remain tethered to the interests of White benefactors. Driven by latent bigotry, such benefactors prove far more invested in buttressing deprecatory racial typecasts than in cultivating Black scholarship. Mr. Norton's privileging of Trueblood's incestuous tale over the university tour exemplifies this. However, even as he seeks to reify racial difference and position himself as the symbolic embodied, his latent "envy" (Ellison, 2002, p. 41) toward Trueblood's incestuous transgression reveals semiotic desire and prompts a momentary collapse of rigid racial boundaries.

Battered by relentless injustices, from lobotomisation to ensure "integrity" (Ellison, 2002, p. 183) to being marionetted like a Sambo doll by the Brotherhood, I.M. realises that he has been trapped between "hard, distorting glass" (Ellison, 2002, p. 3). Thus, he retreats underground to birth himself anew; to spurn the rigidity of established racial hierarchies and self-delineate against societal inscription.

Conclusion and Recommendations

This study reveals racial identity as a constructed fiction perpetuated by dominant discursive paradigms that exalt Whiteness while depicting Blackness as an anarchic savage. Both *Absalom, Absalom!* and *Invisible Man* expose fissures within these constructs, illustrating how moments of disruption challenge the stability of racial archetypes. By critically examining both texts, this analysis underscores the need to reevaluate cultural and historical narratives and dismantle false racial dichotomies to foster a more equitable society.

References

Ellison, R. (2002). *Invisible man*. Spark Pub. <https://modernforms.org/wp-content/uploads/Ralph-Ellison-Invisible-Man-Text.pdf>

Faulkner, W. (1951). *Absalom, Absalom!*. Random House. <https://www.fadedpage.com/showbook.php?pid=20190331>

Kristeva, J. (1984). *Revolution in poetic language*. Columbia University Press.

Morrison, T. (1992). *Playing in the dark: Whiteness and the literary imagination*. Vintage Books.

Roudiez, L. S. (1984). Introduction. In *Desire in language: A semiotic approach to literature and art* (pp. 1–20). Columbia University Press.

THE MOTIF OF PHANTOM IN RELATION TO POLITICAL VIOLENCE IN SRI LANKA: A COMPARATIVE STUDY ON SELECTED POST- COLONIAL NARRATIVES

G.A. Wickramasinghe^{1*}

¹ *Department of English, University of Peradeniya*

Abstract

Many Sri Lankan narratives delve into the backdrop of ethno-political violence in Sri Lanka, which had a huge impact on the local constituents. Many critics have analysed the portrayal of reality with regards to ethno-political violence, yet some novels reshape the depiction of political violence and the nation. *Anil's Ghost* by Michael Ondaatje, *Hungry Ghosts* by Shyam Selvadurai, and *The Seven Moons of Maali Almeida* by Shehan Karunatilaka primarily deal with the motif of phantoms and the phantomisation of Sri Lanka and the nation. This study focuses on how these novels instigate the discourse of human rights, the subaltern, identity formation, and orientalism alongside the motif of phantoms. *Anil's Ghost* highlights the subalternity of the dead and the human rights discourse, *Hungry Ghosts* depicts the identity formation of the characters through the motif of phantoms, while Karunatilaka attempts to phantomise the nation and the victims of political violence. The paper explores how these narratives foster orientalism through the motif of phantoms.

Keywords: *Human Rights Discourse, Identity, Phantoms, Political Violence, Post-Colonialism*

*Corresponding author: Tel.: +94 (71) 001 2122; Email: absd@gmail.com;
<https://orcid.org/0000-0001-7111-2233>

Introduction

The theme of ghosts or phantoms as a motif is linked to mystery, yearning for life, or the subaltern who has no voice to seek justice. The supernatural evokes ominous and fearful sentiments in literary work, including suspense and the sense of alienation from what it takes to be human. Coupling the phantoms with political violence is an exceptional notion that unravels different layers in portraying the nation and political turmoil to the reader. The study focuses on *Anil's Ghost* by Michael Ondaatje, *Hungry Ghosts* by Shyam Selvadurai, and *The Seven Moons of Mali Almeida* (the book that won the Booker Prize, recently) to investigate the implications of the motif of the phantoms as the titles of the novels refer to the dead and the supernatural elements. These novels complicate the discourse of nationalism and portrayal of political violence and the nationhood, often breeding Orientalism; Sri Lanka as a site of unsolved deaths and assassinations which entertains the West and pampers their superiority to Third World as a whole. *Hungry Ghosts* by Shyam Selvadurai combines Sri Lankan mythological and religious connotations of phantoms with the depiction of human experience during belligerent times in Sri Lanka. The writer employs preta concept which is borrowed from Buddhist discourse. He compares preta with Shivan's grandmother and highlights the stingy lifestyle and the consequences of such a life. The writer elucidates extensive and elaborated explanations of the naked prethi which is taught in Buddhist discourse and this tends to entertain the Western readership who are insatiably interested in oriental folklore. Thus, the novel attempts to develop inferior sense of the nation during the ethnic violence in Sri Lanka. Also, the metaphorical use of the ghosts to interpret characters generates a sense of alienation and barbarize the civilisation of Sri Lanka, in the first place. The attempt to show that the connection between mythology of the dead and idiosyncrasy of the character are intricately interwoven bolster the fact that Sri Lanka is a primitive and uncivilised State of nation in the post-colonial literary context. According to Said, Orientalism constructs the East as a space of mystery and uncanny resemblance. With that being said, *Hungry Ghosts'* portrayal and the reference to the supernatural or the phantoms entertain the literary palate of the West, who finds cultural and mythological elements in the third world strange and uncivilised. Thus, the global propaganda of othering and alienating or labelling third-world countries as primitive is perpetuated in the novel. Another argument could be formulated; the writer ties religious connotation to a story that is woven around the sociopolitical realities of ethnic violence, which extensively distorts the sociopolitical realities of Sri Lanka. Religious cosmologies and political turmoil(s) would not go along as they represent two opposing ends of a pole. Therefore, the use

of the motif of phantoms to discuss mainly the ethnic conflict and political violence of Sri Lanka aggravates the status of the nation and the civilization of Sri Lanka. The *Seven Moons of Mali Almeida* by Shehan Karunatilake, which recently won the accolade from the West, The Booker Prize is incessantly imbued with phantoms throughout. The main character speaks as a ghost searching for the truth of his death happened during the civil war. The whole purpose of using the motif is to enhance the country and its nation as a brutal and barbaric entity. Especially the term, “seven moons” implies the unsolved tragedy and the mysterious ambience of Sri Lanka during political violence which, according to the author, has brought injustice to the dead. These thematic references entertain the Western readers, indirectly imposing their superiority complex on the non-European or Non-White countries. As critics point out, the novel deteriorates the depiction of political violence and to add, the motif of phantoms and its unnecessary use further baffles the realities. In other words, Orientalism and Exoticism drip out of the pages of the novel as the writer use the whole set of ghosts and purgatory. In a metaphorical sense, the motif in this novel implies that the ghosts of the dead saunters in the purgatory on search of truth and justice. In other words, the author implies to the western reader that Sri Lanka as a post-colony is a site of the dead whose voices are unheard and not represented. Here, the argument that the dead as a subaltern, or the Sri Lankan society as a site of subaltern, who cannot speak could be formulated because the writer says that the ghosts in the purgatory has no agency to voice their predicaments and the injustice. It is also clear that the motif of phantoms sort of alienates the nation of Sri Lanka and identifies the citizens of Sri Lanka exotic. The paper argues that othering of the nation in the macrocosmic lens takes place by the excessive use of the motif of phantoms.

Anil's Ghost by Michael Ondaatje also deals with the dead and, most importantly, the dead presented in the novel twins with the *Seven Moons of Mali Almeida*, deteriorating the realities of political violence and breeding Orientalism. The novel entertains the Western reader by using the skull of Sailor, a fictitious victim of political violence whose entire trajectory is woven around the skull. Moreover, the title implies the jeopardy and betrayal Anil, a forensic expert who came to Sri Lanka, had to go through in Sri Lanka. Anil's ‘ghost’ figuratively roams in Sri Lanka during times of political violence due to the abrupt betrayal she experienced because of Sarath. Thus, the motif of phantoms invites Western readers to interpret Sri Lanka and its nation as a mysterious entity where injustice reigns. In addition, *Anil's Ghost* mainly brings in the human rights discourse to bring justice to the dead in Sri Lanka.

Anil, as an agent from Geneva to investigate the political assassinations, eventually goes through betrayal, and her ghost lingers in the country, conveying the intrusion of the West (human rights discourse) and ultimately failing to investigate the mysteries of political and ethnic violence in Sri Lanka. Thus, the author presents an alienated version of the nation and political violence to the Western readership, which, once again, perpetuates Orientalism and phantomise the nation of Sri Lanka. Thus, the analysis invites the critical reader to actively engage in problematising a set of Sri Lankan literature that entertains the cultural superiority of the West to view Sri Lankan culture and the country itself as a barbaric and primitive site. The motif of phantoms further phantomises Sri Lanka and its culture and nation as a ghostly entity trapped in the unresolved system of justice and political violence in the eyes of the Western readership.

Material and Methods

The study, which includes a close textual analysis, delves into the motif of phantoms. The novels, through their repeated use of this motif, present problematic depictions of political violence and the nation. Through the content analysis the roles of the main characters are analysed to illustrate the narrative style that deteriorates the reality of political violence. In a deeper examination, the discourse on justice and human rights is identified, a crucial element intricately woven into the motif and embodied by the main characters. This textual analysis is crucial in understanding the conceptualisation of phantoms, or the phantomisation of Sri Lanka and its culture. The comparative study of the three novels, including the Booker Prize winner, *The Seven Moons of Mali Almeida*, serves to highlight the diverse and shared ways in which Sri Lanka and its cultural and political unrest are represented to a Western readership. Also, a subtle scrutiny of the motif which is governed throughout the books takes place to unravel the ways in which motif works as an incentive to perpetuate and engrave Orientalism in post-colonial literature. Secondary references including Said's conceptualisation of Orientalism, *Can the Subaltern Speak* by Spivak and other seminal critiques and newspaper articles are used to strengthen and bolster the main arguments developed in the paper.

Results and Discussion

The comparative study unravelled the scathing portrayal of political violence through the recurrent motif of phantoms. In *The Seven Moons of Mali Almeida*, the mystery and justice are presented through the ghost of the main character, Mali Almeida, a dead photographer who intends to seek the truth of

his death. In *Hungry Ghosts*, the religious connotation of phantoms, *preta*, an insatiable phantom, is attributed to the characters which demean the identity of the characters. *Anil's Ghost*, as the title suggests, the ghost of the main character, gets into the mystery of the skull of Sailor, and ultimately, Anil's ghost saunters into Sri Lanka in search of justice and truth. This novel directly states that Greek tragedies are far better than the Sri Lankan civil war, which is a contemptuous comment. Meanwhile, the character of Anil, a representative of the Human Rights Institution from Geneva, shows how the Western invasion seeps into the global south. Most importantly, the phantomisation of Sri Lanka has taken place in the novels as a repercussion of the excessive use of the motif of phantoms or ghosts. All this evidence proves the prevalent issue of Orientalism and the phantomisation of Sri Lanka and its culture during times of political unrest. The depiction of the nation and Sri Lanka is imbued with inferiority and the concept of alienation and othering takes place with the involvement of ghosts in the novels.

Conclusion and Recommendations

The trio attempts to demean the country and distort the portrayal of political unrest in Sri Lanka. Other than *The Seven Moons of Mali Almeida*, which unnecessarily uses the motif of phantoms, the other two novels are slightly better at portraying identity and relationships between characters. But overall, the novels solely entertain the Western readership, as seen in their use of familiar tropes and themes. The Booker Prize winner facilitated the American interest in oriental cultures with inferior elements. Furthermore, the study understood how the nation is depicted as a 'failed' entity in terms of navigating ethnic violence. Overall, the novels could have minimised the use of the motif so the cultural appropriation and the reality of the political unrest would be presented plausibly. It is ironic that as a nation, Sri Lanka has undergone multiple failures but using phantoms as a scapegoat to besmirch the country's status is also a failure, in the literary realm. So, the eventual point is that the trio has three different plots and trajectories but set against the same backdrop of political violence. Yet, the depiction of political violence and the country's status through the use of phantoms as a motif rather 'phantomises' and 'others' the nation and Sri Lanka, deteriorates the political realities in Sri Lanka, represents the country as a site of the dead and a haunted realm where the nation fails to address justice to the dead; therefore, the dead/ghosts haunts the country in search of justice, and breeds Orientalism and Exoticism entertaining the Western readership.

References

Chakravorty, M. (2013). The dead that haunt Anil's ghost: Subaltern difference and postcolonial melancholia. *PMLA/Publications of the Modern Language Association of America*, 128(3), 542–558. <https://doi.org/10.1632/pmla.2013.128.3.542>

Said, E. W. (2014). *Orientalism*. Vintage.

Selvadurai, S. (n.d.). *Shyam Selvadurai - The hungry ghosts*. <https://www.shyamselvadurai.com/ghosts.html>

Spivak, G. C. (2003). Can the subaltern speak? *Die Philosophin*, 14(27), 42–58. <https://doi.org/10.5840/philosophin200314275>

Walpola, T. (2023, January 15). The seven moons of Maali Almeida: A failed novel about a failed people. <https://island.lk/the-seven-moons-of-maali-almeida-a-failed-novel-about-a-failed-people/>

SRI LANKAN ENGLISH SYNTACTIC FEATURES ON SOCIAL MEDIA: A STUDY BASED ON THE YOUTUBE CHANNEL BLOCK AND DINO

Y.R. Uyangoda^{1*}

¹ *Department of English Language Teaching, University of Kelaniya*

Abstract

The purpose of this study is to explore the presence of Sri Lankan English syntactic features on social media with regard to a popular YouTube channel named Block & Dino. Therefore, after carefully selecting six videos and two shorts, a qualitative content analysis was conducted and the preliminary results of the study show that contractions, borrowings from Sinhala and Tamil, tag and equality markers, verb deletion in questions, and pronoun deletion are the Sri Lankan English syntactic features that can be identified on the particular YouTube channel. Secondly, the same analysed data reveal that pronoun deletion is the most common Sri Lankan English syntactic feature in the selected videos and shorts. Hence, this study acts as a glance at the presence of Sri Lankan English syntactic features on social media through one YouTube channel. In addition, it highlights the role of syntactic features in making Sri Lankan English a unique South Asian variety.

Keywords: *Features, Social Media, Sri Lankan English, Syntax, YouTube*

**Corresponding author: Tel.: +94 (76) 577 0229; Email: ruvinathuyangoda@gmail.com*

Introduction

As a world lingua franca, English has obtained a dominant position in numerous countries. According to Kachru (2005), the spread of the English language can be represented through the three-circles model namely the inner circle, the outer circle, and the expanding circle. Hence, the outer circle represents varieties of English in the second language setting. A case in point is Indian English, Sri Lankan English, Nigerian English, and Singaporean English. Among them, Sri Lankan English has been given much attention by several researchers and according to Gunasekara (2005), it is considered to be “the language used by Sri Lankans who choose to use English for whatever purpose in Sri Lanka” (ibid. p. 11). Hence, it leads to the identification of the study of Sri Lankan English syntax. Gunasekara (2005) states that although Sri Lankan English has the fundamental rules of English syntax, unique features can be identified in speech. As a social media platform, YouTube plays a dominant role in contemporary society and it has become a virtual world in which syntactic features of Sri Lankan English are present. A case in point is the YouTube Channel Block and Dino. Although previous studies have given their major focus on Sri Lankan English in relation to phonology and morphology, a lack of attention has been paid to the field of syntax. In addition, the same phenomenon can be identified on social media with regard to YouTube. Therefore, the present study aims to fill the identified gap while answering the following two research questions.

1. What are the Sri Lankan English syntactic features that are evident in the YouTube Channel Block and Dino?
2. Is there a category of features that can be identified as the most common Sri Lankan English syntactic feature in the YouTube channel Block and Dino?

Material and Methods

Employing purposive sampling, six videos, and two shorts were selected from the YouTube channel since they were made focusing on English viewers in Sri Lanka. The selected six videos include ‘Mohini’, ‘A Christmas Quarrel’, ‘Couple Wars’, ‘Couple Confessions’, ‘Sri Lankan Matchmaking’, and ‘The Thanhadasas’ while the selected two shorts include ‘Naughty Amma’ and ‘Weekend Wreckaway’. Firstly, to gather the necessary qualitative data for the first research question, the selected materials were analysed thematically based on the characteristics of Sri Lankan English syntax in speech introduced by Gunasekara (2005). Secondly, the required data for the second research question were identified from a quantitative analysis.

Results and Discussion

The results of the analysed data provide proper answers to the research questions. Hence, borrowings from Sinhala and Tamil, use of tags and equality markers, verb deletion in question, pronoun deletion, and use of contractions can be easily identified as the Sri Lankan English syntactic features on social media.

Crystal (2008) states that borrowing refers to “a linguistic form taken over by one language or dialect from another” (ibid. p. 58). Hence, it plays a dominant role in Sri Lankan English since different types of Sinhala and Tamil words exist in the variety. According to Gunasekara (2005), it represents a unique syntactic feature in Sri Lankan English. Therefore, this phenomenon can be seen in the selected YouTube videos and shorts: “Koththu”, “Mallung”, “Handiye koththu kade”, “Paththini amma”, “Bombili”, “Karawala theldala”, and “Mahagedara”, “Ah! ”, “Ane”, “Appo!”, “Ayyo!”, “Sha!”, “Ammi”, “Thaththi”, “Putha”, “Duwa”, “Nangi”, “Ayya”, “Machan”, “Baba”, and “Kapuwa”.

Secondly, Gunasekara (2005) states that there are three types of examples for the syntactic feature “the use of tags and equality markers”: “no”, “men”, and “isn’t it?”. However, the analysed data reveal that there are only two examples of this feature: “no” and “men”.

Thirdly, in Sri Lankan English, verb deletion in questions can be also identified (Gunasekara, 2005). Hence, this phenomenon is evident in “How that?” and “On the way from where?”. In the first example, the presence of a verb is not visible although it has to be grammatically correct as “How is that”. In the second example, the verb phrase ‘are you’ is not used.

Fourthly, Gunasekara (2005) states that the act of deleting pronouns in speech can be found in Sri Lankan English. A case in point is the deletion of personal pronouns: “Finally remembered your mother ah?” and “Should have told us no men”. It is evident from these examples that the way personal pronouns have been deleted by speakers although the pronoun “you” has to be used in order to make the sentences grammatical.

Lastly, the use of contractions can be identified (Gunasekara, 2005). Hence, the examples demonstrate its use in various situations: “Aren’t you coming you?” and “How’s the new year been?”.

Answering the second research question, the analysed data demonstrate pronoun deletion as the most common syntactic category in the selected videos and shorts. Hence, it is evident in “Naughty Amma”, “Weekend Wreck away”,

“Mohini”, “A Christmas Quarrel”, “Couple Wars”, “Couple Confessions”, and “The Thanhadasas” excluding “Sri Lankan Matchmaking”.

Conclusion and Recommendations

In conclusion, the data analysis of the present study reveals Sri Lankan English syntactic features on social media based on six videos and two shorts from the YouTube channel Block & Dino. Therefore, borrowings from Sinhala and Tamil, the use of tags and equality markers, verb deletion in questions, pronoun deletion, and the use of contractions have been discovered. In addition, it is evident that pronoun deletion is the most common Sri Lankan English syntactic feature in the selected videos and shorts. Since the present study is based on a selected number of videos and shorts from a particular YouTube channel, extensive research can be conducted to investigate the same phenomena focusing on all the English videos and shorts on the same YouTube Channel. Therefore, it can encourage future researchers to pay more attention to Sri Lankan English syntax.

References

- Crystal, D. (2008). *A dictionary of linguistics and phonetics*. Blackwell Publishing.
- Gunasekera, M. (2005). *The postcolonial identity of Sri Lankan English*. Katha Publishers.
- Kachru, B. B. (2005). *Asian Englishes beyond the canon*. Hong Kong University Press.

EXPLORING THE BUDDHIST UNDERCURRENTS IN JEAN DE LA FONTAINE'S FABLES: A COMPARATIVE ANALYSIS WITH “JĀTAKA TALES”

E.G.I.P. Wickramasinghe^{1*}

¹*Department of Language Skills Development, Buddhist and Pali University of Sri Lanka*

Abstract

This paper investigates the presence of Buddhist influences in Jean de la Fontaine's Fables by drawing thematic and moral parallels with the Jātaka Tales, ancient Indian stories embodying Buddhist teachings. Using a comparative analysis framework, this study selects specific fables and Jātaka stories based on shared moral themes, narrative structures, and character archetypes. Each pair of texts is analysed to identify Buddhist ethical principles reflected in Fontaine's work, particularly focusing on the concepts of compassion, karma, and wisdom. Through this systematic thematic comparison, the research substantiates the hypothesis that Fontaine's moral messages align with Buddhist principles. This cross-cultural examination enriches our understanding of Fontaine's work and highlights the universal resonance of ethical teachings across different literary traditions.

Keywords: *Buddhist Influences, Fables, Jātaka Tales, Jean de la Fontaine, Moral Teachings*

*Corresponding author: Email: indiwaree@bpu.ac.lk;

Introduction

Jean de la Fontaine, a seminal figure in 17th-century French literature, is celebrated for his Fables, which skillfully use animal characters to impart moral lessons that offer rich insights into human behaviour and societal norms. Although Fontaine's primary goal was educational, his work also reflects deeper themes that resonate universally. This paper explores the Buddhist influences within Fontaine's Fables by drawing comparisons with the Jātaka Tales, ancient stories of the Buddha's previous lives, known for their didactic nature and ethical teachings. Furthermore, it examines the role of the Panchatantra; an influential Indian collection of animal stories that not only connects Fontaine's fables to broader Eastern traditions but also shares thematic elements with the Jātaka Tales. Through analysing shared themes, such as compassion, karma, and wisdom, this study seeks to reveal how Fontaine's fables echo Buddhist moral principles. By tracing these cross-cultural connections, the research aims to illustrate the transmission of ethical ideas across time and geography, underscoring the universal resonance of these teachings within both Eastern and Western literary traditions.

Material and Methods

The methodology involves a comparative literary analysis of selected fables by Jean de la Fontaine and corresponding stories from the Jātaka Tales and the Panchatantra. The selection criteria for the fables, Jātaka stories, and Panchatantra tales include the presence of animal characters, moral lessons, thematic similarities concerning ethical conduct and human behaviour, and representations of fundamental truths about human existence. Primary sources include Jean de la Fontaine's Fables, translated versions of the Jātaka Tales, and the Panchatantra. Secondary sources comprise scholarly articles on Buddhist influences in literature, the historical context of the Jātaka Tales and Panchatantra, and critical analyses of Fontaine's works.

Results and Discussion

The comparative analysis reveals significant thematic and moral parallels between Fontaine's fables, the Jātaka Tales, and the Panchatantra. For instance, in "The Lion and the Rat" by La Fontaine, the lion spares the rat, who later saves him, illustrating the moral of unexpected help and gratitude. This parallels the Tittira Jātaka (Jātaka No. 37), where the lion is saved by a mouse he had once spared, reinforcing the Buddhist teaching of karma and the benefits of compassionate actions. The Panchatantra, similarly, contains tales where small, seemingly insignificant creatures play crucial roles in helping

larger animals, emphasizing the value of all beings and the importance of mutual aid.

Cohen and Shehada (2017) argue that "the moral narratives in the Panchatantra and La Fontaine's fables exhibit a shared didactic purpose, despite their distinct cultural origins." They highlight the historical trajectory that connects Indian moral tales to Western literary traditions, suggesting that the Panchatantra itself was influenced by earlier Buddhist teachings, as found in the Jātaka Tales. This supports the view that Fontaine's fables resonate with Buddhist principles, despite the lack of explicit references to Buddhism.

The thematic similarity between "The Tortoise and the Hare" and the Mahāsupina Jātaka (Jātaka No. 538) further exemplifies the virtues of persistence and humility over arrogance and haste, a common theme in both the Jātaka Tales and the Panchatantra. In the Panchatantra, slow but steady animals often prevail over their swifter counterparts, mirroring the moral lessons found in both La Fontaine's fables and the Buddhist stories.

The analysis extends to "The Fox and the Crow," where themes of flattery and deceit are prevalent. In La Fontaine's fable, the fox flatters the crow to steal its cheese, teaching a lesson about the dangers of vanity and gullibility. The corresponding Virocana Jātaka (Jātaka No. 143) also depicts a fox using cunning words to deceive others, aligning with Buddhist caution against deceit and the importance of wisdom. The Panchatantra, known for its clever animal tales, often includes stories where animals use wit and intelligence to navigate challenges, reflecting similar moral teachings.

Scholars like Cohen and Shehada (2017) provide a comprehensive examination of the migration of didactic animal illustrations from India to the West, indicating that "there exists a historical trajectory that connects Indian moral tales to Western literary traditions." This historical context underscores the plausibility of Buddhist influences permeating La Fontaine's work, even if indirectly, through the intermediary influence of the Panchatantra.

The study finds that the moral messages in Fontaine's fables echo the ethical teachings encapsulated in the Jātaka Tales and the Panchatantra. Each fable conveys insights akin to those found in Buddhist scriptures, illustrating fundamental truths about human existence and ethical conduct. For instance, the notion of karmic retribution seen in "The Lion and the Rat" mirrors the Buddhist principle that actions have consequences, a central tenet of the law of karma.

The Panchatantra's influence is significant because it acts as a bridge,

transmitting the ancient wisdom of the Jātaka Tales to the West. Composed around 300 BCE, the Panchatantra is a collection of interrelated animal fables in Sanskrit verse and prose. These stories have been translated into many languages and adapted to numerous cultures, contributing to the global dissemination of their moral and ethical teachings.

Cohen and Shehada (2017) note that "the Panchatantra has long been recognised as a major source of inspiration for La Fontaine's fables." They explain how the Panchatantra's tales of animals, imbued with moral and practical wisdom, likely reached Europe through Arabic translations. These stories, rich in ethical guidance, align closely with the moral teachings found in the Jātaka Tales, suggesting a shared didactic tradition that transcends cultural boundaries.

The Panchatantra itself is deeply rooted in Indian philosophical and ethical thought, much of which overlaps with Buddhist teachings. The stories emphasise values such as wisdom, justice, and the importance of ethical conduct, core principles found in both Hindu and Buddhist traditions. For example, the story of "The Monkey and the Crocodile" in the Panchatantra, which teaches the importance of wit and intelligence over brute strength, resonates with similar stories in the Jātaka Tales.

By analysing these connections, this research highlights how Fontaine's fables are part of a larger, interconnected web of literary and philosophical traditions. The moral lessons in Fontaine's fables, such as the dangers of vanity in "The Fox and the Crow" or the value of persistence in "The Tortoise and the Hare," can be traced back to the ethical teachings of the Panchatantra and, by extension, the Jātaka Tales.

The cross-cultural examination of these fables reveals the universal resonance of ethical teachings across different literary traditions. This interconnectedness underscores the impact of Indian cosmological ideas on Western literature, demonstrating that the ethical principles conveyed in Fontaine's fables are not confined to a single cultural context but are part of a broader, shared human heritage.

Conclusion and Recommendations

This study concludes that Jean de la Fontaine's Fables exhibit notable parallels with the Jātaka Tales and the Panchatantra, reflecting shared moral and ethical principles. By shedding light on the underexplored intersection between Western literature and Eastern philosophy, this research enriches our understanding of Fontaine's enduring legacy and the universal resonance of

Buddhist principles.

The findings suggest that further research could expand the comparative analysis to include more fables, Jātaka stories, and Panchatantra tales, providing a broader perspective of the cross-cultural influences in literature. Scholars should consider the broader implications of such influences, promoting a more inclusive understanding of literary heritage. Educational curricula might benefit from integrating these comparative studies, highlighting the universality of moral teachings and the interconnectedness of global literary traditions.

By reevaluating Fontaine's Fables through a lens informed by cross-cultural influences, this research deepens our appreciation of the timeless themes that continue to inspire and shape the literary imagination across different cultures and eras.

References

Bared, R. (1995). *La Fontaine*. Seuil.

Bibliothèque Nationale de France. (1996). *Jean de la Fontaine, cahiers pédagogiques des expositions*.

Cohen, S., & Shehada, H. (2017). From the "Panchatantra" to La Fontaine: Migrations of didactic animal illustrations from India to the West. *Artibus Asiae*, 77(1), 5-68.

Dandrey, P. (1995). *La Fontaine*.

De, J., & Gustave Doré. (1998). *Fables de La Fontaine: Texte intégral*. Ars Mundi.

Dhammapada, & Radhakrishnan, S. (1966). *The Dhammapada with introductory essays, Pali text, and English*. Oxford University Press.

Francis, H. T., & Thomas, E. J. (2014). *Jataka tales*. Cambridge University Press.

Muller, M. (2014). *Dhammapada*. Createspace.

Ryder, A. W. (2005). *The Panchatantra*. Kessinger Publishing.

Tilley, A. (1939). La Fontaine and Bidpai. *The Modern Language Review*, 34(1), 21. <https://doi.org/10.2307/3717127>

A CRITICAL STUDY ON SARASŌTHIMĀLAI: A TAMIL LITERATURE STAGED IN THE SINHALESE KING'S ROYAL COURT

J. Harosana^{1*}

¹*Department of Languages, Sabaragamuwa University of Sri Lanka.*

Abstract

Pluralism is a political theory and an idea. The idea is that people of different races, religions, social classes, and other groups can live together in a society while maintaining their own traditions and interests. Sri Lanka is a pluralistic country. There is a lot of evidence that ancient rulers of Sri Lanka encouraged pluralism among Sinhala and Tamil communities to enrich the country. In the current scenario, Sinhalese and Tamils are emotionally divided due to racial antagonism and they maintain long space among them. Therefore, the main scope of this study is to bring the concept of pluralism in contemporary literary and practical context in Sri Lanka by highlighting the pluralism that existed in Sri Lanka's ancient history between Sinhala and Tamil communities. This study is based on 'Sarasōthimālai' as a primary source, has been analysed using historical and sociological approaches. Sarasōthimālai in Sri Lankan Tamil literature is a symbol of pluralism. In a multi-ethnic environment, it was published and encourages social harmony and peaceful coexistence. It was staged in the royal court of Parakramabahu in the Dambadeniya kingdom period. It appeared in 1310 A.D. Sarasōthimālai is primary evidence of pluralism and a milestone of ancient Astrology Tradition in Tamil.

Keywords: *Pluralism, Sarasōthimālai, Dambadeniya, Astrology, Tradition, Tamil Literature*

*Corresponding author: Email: harosana87@gmail.com.

Introduction

Sri Lanka is a pluralistic country. There is a lot of historical, literary, and epigraphic evidence that ancient rulers of Sri Lanka encouraged pluralism among Sinhala and Tamil communities to enrich the country. In the fields of Tamil language, literature, and culture of Sri Lanka, evidence of pluralism has been identified. Tamil influence on Sinhala literary culture and Sinhala influence on Tamil literary culture are acknowledged. Many of Sri Lanka's ancient rulers obviously led to such cultural fusion and Pluralism.

Pluralism is a political theory and an idea that people of different races, religions, social classes, and other groups can live together in a society while maintaining their own traditions and interests. In the current scenario, Sinhalese and Tamils are emotionally divided due to racial antagonism and they maintain long-distance among them. Therefore, the main objective of this study is to bring the concept of pluralism to contemporary literary and practical context in Sri Lanka by highlighting the pluralism that existed in Sri Lanka's ancient history between Sinhala and Tamil communities by analysis Sarasōthimālai.

Literature Review and Research Gap

In the history of Sri Lankan Tamil literature, significant studies have been published related to astrology, medical literature, and 'Sarasōthimālai' from the literary-historical point of view. In particular, A. Sathasivam, F.X.C. Nadaraja, K.S. Nadaraja, S. Sivalingaraja, V. Maheswaran, T. Manoharan and others have researched. However, since these are introductory studies on Tamil astrology, and medical literature and do not examine the composed background of 'Sarasōthimālai' in the concept of pluralism therefore this analysis is based on the research gap.

Objective of the Study

The objective of this research is based analysing the composed context of the 'Sarasōthimālai' in the concept of pluralism

Material and Method

This study has used 'Sarasōthimālai' as a primary source and other literatures and epigraphical evidence related to this framework as secondary sources. It has been analysed using historical and sociological approaches and as content-based analysis.

Results and Discussion

Background of the Study

The fields of astrology and medicine have received great attention not only in the history of Sri Lankan Tamil literature but also in the history of Sri Lanka and Sinhala literature. Astrology and medicine are two of the most important traditions cherished and protected by the Tamil and Sinhalese royal dynasties. Sri Lankan historical documents and archeological evidence containing medical equipment including 'medical bed' attest to King Buddhadasa's emphasis on the field of medicine. During his time, the medicine for poison was popular in Sri Lanka. Medical literatures like 'Yogarnavaya' 'Prayoga Ratnavaliya' and astrology literatures like 'Thotakamunumittha', 'Navagraka Rathanava', 'Navagraka Sangriha', and 'Mekulpadalaya' have been published in the Sinhala language. Astrology Literatures such as Sarasōthimālai, Seharasa Sekara Malai, Santhana Theepikai, and Medical Literatures such as Seharasa Seharasa, Pararasa Seharasa, and Amudakaram were published in the Tamil Language in the same era.

Introduction to Sarasōthimālai

In the history of Tamil literature, 'Sarasōthimālai', the first astrology book appeared in the year 1310 A.D., and it is also found in the Sri Lankan Tamil literature as the first book.

Pluralism and Sarasōthimālai

Sarasōthimālai in Sri Lankan Tamil literature is a symbol of pluralism. It is a piece of Tamil Literature that was published by a Sinhala king without any disharmony or discrimination. It is staged in the royal court of Parakramabahu, king of the Dambadeniya kingdom. The kingdom of Dambadeniya is referred to as 'Thambai' in the forward of the Sarasōthimālai.

The Dambadeniya period (1220 - 1347 AD) is a prominent period in the history of Sri Lankan literature and this period is called the golden age of Sinhala literature by Sinhala literary scholars. Tamil-Sinhala influences are more common in literature during this period. For example, the Ancient Sinhala grammar book, Sidath Sangara which is under the influence of Veerachoyam, (a Tamil-Buddhist grammar book) appeared during this period. Saddharmarathnavali, Sinhala Jataka Stories and Dalada Siritha, the literatures which were influenced by the Tamil literature also appeared during the Dambadeniya period. On this wise, a Tamil Literature which is Sarasōthimālai was composed in this period and was promoted by king Parakramabahu of Dambadeniya.

Sarasōthimālai developed the stability of peaceful coexistence, for example, the author sees Parakramabahu as someone who ruled impartially and with the characteristics of Tamil and Chola royal lineage. Sinhala king Parakramabahu was considered by the Tamil author a Tamil King. King Parakramabahu was praised by the author as a giver, a hero, one who does not fail in justice like Tamil Kings.

Tamil Historians refer to the Parakramabahu referred to here as the fourth Parakramabahu (corresponding to 1310 AD, when the book appeared). The fourth Parakramabahu is called as Pandit Parakramabahu and the book Dalada Siritha is credited to have been written by him. Therefore, it can be interpreted that he knew Tamil Language and Literature to a greater extent. The fact that, the Tamil literature Sarasōthimālai was staged in the royal court of a Sinhalese king shows the importance given by kings like Parakramabahu to Tamil language and literature.

In multi ethnic environment Sarasōthimālai was published and encourages social harmony and peaceful coexistence. The author of this book is Bhosarasa Pandithar known as Devinuwara Perumal. Devinuwara Perumal is his nickname or special name; researchers believe that the author of this book is from Devinuwara, a place in the southern part of Sri Lanka. These messages are known through the internal evidence of the book.

Content of Sarasōthimālai

Sarasōthimālai expresses the rituals and religious matters related to the life of a human being to be followed from birth to death. Thus, the chapters of this book have been divided accordingly. Its chapters contain: life rituals and methods, Horoscope, zodiac signs, auspicious time to start something new or important, methods to be followed in case of illness, king related rituals, procedures to be followed while going on a pilgrimage; Omens, procedures to be followed while building a house, fasting methods, solar and lunar dates, marriage compatibility etc.

Many Events and days in the Tamils - Hindus and Sinhalese - Buddhist are based on the lunar cycles. A few holidays are based on the solar cycle, such as the April New year, Pongal while Sarasōthimālai prioritises lunar-solar system.

Meanwhile, astrology was famous during the Polonnaruwa, Dambadeniya, and Kotte Kingdoms. The kings were interested and strongly believed in astrology. They looked for the assistance of mathematical predictions and auspicious times in astrology before each challenging situation related to their

lives and the country. Brahmins and monks helped the kings because they were experts in the field of zodiac in Sri Lanka. Ancient kings of Sri Lanka welcomed Brahmins and monks and encouraged them to do zodiac Literature to rule the country in an auspicious way. In this line, king Parakramabahu promoted the Bhosarasa Pandithar who is a Tamil Brahmin who lived in Devinuwara.

Conclusion and Recommendations

Sarasōthimālai in a Sri Lankan Tamil literature is an icon of pluralism. In multi-ethnic environment it was published and encourages social harmony and peaceful coexistence. Sarasōthimālai disseminated indigenous knowledge throughout Sri Lanka in the field of astrology and medical literature in Sinhala and Tamil languages. After Sarasōthimālai, many astrology books appeared in the history of Sri Lankan Tamil Literature. There was a continuous tradition of astrology and medicine in Sri Lanka From 1310 to 1798 both in literature and in its procedural form. Therefore, it can be concluded that the tradition of pluralism and astrology in Sri Lankan Tamil literature has been started by Sinhalese king Parakramabahu who promoted to compose it.

References

- Godakumbura, C. E. (1955). *Sinhalese literature*. Colombo: The Colombo Apothecaries Co. Ltd.
- Guruge, A. W. P. (Ed.). (1994). *Irupaththu Munru Nottarndu Kaala Sinhala Bovuththa Kalasaaram* (Tamil Translation). Education and Cultural Ministry.
- Kanagarathinam, T. (1995). *Tamil Sinhala Ilakkiya Uravugal*. Colombo.
- Padmanathan, S. (1978). *The kingdom of Jaffna*. Sri Lanka.
- Rahunatahiyar, S. Nadarasaiyar. (Ed.). (1985). *Sarasōthimālai*. Jaffna: Sothida Pirakasa Yanthira Saalai.
- Rahunatahiyar, E. S. (Ed.). (1940). *Santhana Theppikai*. Jaffna: Sothida Pirakasa Yanthira Saalai.

**THE POWER OF CHOICE: BEYOND THE MARITAL
BIND - A PSYCHOANALYTIC, FEMINIST AND
HEGELIAN ANALYSIS OF A DOLL'S HOUSE BY
HENRIK IBSEN AND JASMINE BY BHARATHI
MUKHERJEE**

D.D.D. Mannapperuma^{1*}

¹*Sabaragamuwa University of Sri Lanka*

Abstract

The study accentuates the autonomy and the power of choice of women entrapped by the institution of marriage in patriarchal societies. A qualitative mode of study is utilised, along with textual analysis and an application of the psychoanalytic, feminist, and Hegelian lens, to excavate the journey of female submissiveness to empowerment in Henrik Ibsen's "A Doll's House" and Bharati Mukherjee's "Jasmine." The primary objective of the study is to determine whether the novels' female protagonists can make autonomous choices to emancipate themselves from marital ties that have been forcefully imposed on them, neglecting their personal choice, which was followed by their deliberate exits from the institution of marriage in their respective societies. By examining the representation of the 19th century European woman and the 20th century South Asian woman across different eras and cultures, the study aims to excavate the female endeavour of making a choice more stable and autonomous to physiologically and psychologically exit from the marital ties being a part of the same institution. The study finds the inner psyche of Nora and Jasmine, highlighting their self-consciousness and recognition of their authentic selves, enabling them to make autonomous choices to accept their lives beyond society's set norms and rules. To conclude, this analysis provides insights into the potential for the 21st century woman to assert autonomy by being empowered financially, educationally, and ideologically in their cohorts, irrespective of temporal and territorial disparities.

Keywords: *Female Empowerment, Female Subservience, Patriarchy, Power of Choice and Autonomy*

*Corresponding author: Email: ghanumannapperuma@gmail.com;

Introduction

The quest for female autonomy within the institution of marriage has been an argumentative subject in patriarchal societies. The study excavates this theme of owning to the autonomous nature of making a choice within the institution of marriage which is examined through psychoanalytic, feministic, and Hegelian analysis of Ibsen's *A Doll's House* and Mukherjee's *Jasmine*. The study's main objective is to excavate whether the female protagonists, Nora and Jasmine, the subordinates of the institution of marriage, can make autonomous choices that emancipate them from social constraints. The idea mainly explores the choice of taking a physiological and psychological exit from the constraints of institutionalized marriage that societal ties trapped them in. By illustrating the representation of the 19th century European woman and the 20th-century South Asian woman, the study aims to explore the female endeavour of making a choice more stable and autonomous to exit from the marital bind across different eras and cultures. The study further explains that jumping into the institution was not a choice of content of either Nora or Jasmine. The women had no option they were not given a space to choose their own. Yet the study explores the layers of resistance that they exhibit towards the forceful implementation of a choice of marriage. The women had no choice when being a part of the institutionalised marriage but that does not mean that they have to live with this for the rest of their lives. The unbearable margins and enforcements have empowered them to be a voice to their agonies and let society be heard that these women too expect to be recognised, they desire more in life beyond any marital bind.

The two female protagonists of the two texts aim to view the issue in a holistic atmosphere where they make autonomous choices that drastically challenge and transcend societal constraints. Set against 19th-century Europe and 20th-century South Asia, the narratives offer a comparative perspective on women owning agency across different eras and cultures. Existing literature on *A Doll's House* centres on the liberation of an individual from restraints of customs and conventions due to monetary issues and also to deal with the marital problems of middle-class people (Haque, 2019), investigating the women of the era of Ibsen (Mocbil, 2023).

The studies on *Jasmine* highlight the identity transformation through translocation (Naiker, 2015), A Marxist-feminist and cultural approach study of *Jasmine* to discuss the possibilities of anon-western feminism and show how *Jasmine's* feminism is liberal based on choice (Petersen, 2014) and more studies on investigating the cultural conflict and quest for identity in *Jasmine* (Erten,

2013). The gap is notable to observe the importance of a comparative analysis of the two texts to comprehend the universal struggle for female autonomy and owning a choice to take a physiological and a psychological exit from the institutionalised marriage that was forcefully imposed on them within different cultural and temporal frameworks.

Mukherjee's Jasmine exhibits the character of the protagonist Jasmine to be a challenging personality. "A village girl, going alone to America, without job, husband, or papers? I must be mad!" (Ibsen, 1879). Jasmine has undergone a psychological journey to escape the marital binds that have been imposed on her without her choice or consent. The quote elucidates Jasmine's courage and autonomy of choice as she defies the expectations of a widow in her community. Jasmine navigates through a complex journey challenging societal ties and making solid decisions that assert her choice or consent which exhibits her potential to embrace self-consciousness and authenticity within restrictive cultural frameworks. Further, it is evident to mark the beginning of transformation in Jasmine's life when she boldly embraces the renaming of Jyoti to Jasmine which empowers her voiceless powerless self to break through the traditional marital binds and imposed identity.

It is rather unexpectedly and drastically evident to see how Nora entirely takes a massive physiological and psychological exit from the institutionalised marriage. The torturous journey has brought so much power to herself that she becomes an entirely different more empowered, stronger version of herself. She makes a choice, a rather socially unexpected decision to quit the marital binds. Nora: "I only know that to go is necessary for me, I have other duties equally sacred, Duties toward myself" (Ibsen, 1879). The exploration of the inner psyches and their journeys towards recognising self-consciousness authenticity and rawness in life illuminates the potential for contemporary women to proclaim autonomy of life within patriarchal frameworks as it could emancipate them from being submerged and controlled even in the contemporary world. Hence the study offers a holistic view of female autonomy of having a choice even when being captives of institutionalised marriage across different historical and cultural contexts contributing to the understanding of the universal struggle for females and further, providing insights into the evolving dynamics of marriage and female empowerment in the 21st century.

Material and Methods

The study is qualitative and a textual analysis of the selected two texts which will be conducted with a theoretical application of psychoanalytic feministic and Hegelian approaches to explicate a close reading of the journey of owning

female empowerment and having a choice to exit the marital binds which suffocate the female in the institutionalised marriage. The primary information will be collected through a textual analysis focusing on themes, characters, society and culture and the secondary information and facts will be focused on analysing scholarly articles. The sample selection incurs limitations, yet to examine the key concepts of the study such as female subjugation, female empowerment, and struggle against societal constraints in different eras across different cultures supports to be excavated via a comparative study conducted using the two texts.

Freudian Psychoanalytic theory will be applied to explore the craving desire in the subconscious indicating the motivation and desire for emancipation. A Feminist analysis will focus on factors of marginalisation, subjugation and even gender dynamics that shape the choices of a female highlighting instances of comprehending resistance and empowerment. Hegelian dialectics will be utilised to understand the progression of the protagonists' self-consciousness and their journey towards self-realisation. The application of the aforementioned theories will majorly make way for the female protagonists to make autonomous choices to exit the institution of marriage. "One is not born a woman but becomes one" (Beauvoir, 1949) Simone de Beauvoir in her seminal work *The Second Sex* celebrates the idea of how females need to challenge the restrictive identities imposed upon them by the societies they are born to. Such that the two protagonists of the texts are expected to be understood as rebellious characters.

"I felt myself dead in their company, with my long hair and schoolgirl clothes. I wanted to scream, "Feudalism! I am a widow in the war of feudalisms."

(Mukherjee, 1989)

Jasmine resists and feels excluded among other widows who have accepted their passive roles. For these women, widowhood is not personal but a restrictive role reinforcing their dependency on society. Jasmine screams at the feudal values and signals her refusal to surrender to these expectations. She takes a massive and strong psychological exit from these practices which is a part of the marital ties. Beauvoir explores how women need to reshape these forces imposed by the culture, tradition and mainstream society. She rejects being labeled as the widow and in choosing to reject these expectations she merely redefines her identity as an autonomous being.

"If I had been a boy, my birth in a bountiful year would have marked me as lucky, a child with a special destiny to fulfil. But daughters were curses. A daughter had to be married off before she could enter heaven, and dowries

beggared families for generations.”

(Mukherjee, 1989)

“I am a tornado. I hit the trailer parks first, the prefabs, the weakest links. How many more shapes are in me, how many more selves, and how many more husbands?”

(Mukherjee, 1989)

When comprehending Judith Butler’s Performative Theory, it highlights the constructed nature of gender roles and its application in the study posits the journey towards autonomy with resistance against performative constraints of their societies which can be identified through the female representation.

Nora: *“Yes, Torvald. Without you, I am utterly helpless.”* (Ibsen, 1989)

Nora: *“I mean then I passed over from father's hands into yours. You settled everything according to your taste, or I did only what you liked; I don't exactly know...I lived by performing tricks for you, Torvald. But you would have it so. You and father have sinned greatly against me. It is the fault of you two that nothing has been made of me”.*

(Ibsen, 1989, p. 139).

Hegel’s concept identifies a dynamic where Nora’s position as the slave holding a subordinate position gains self-consciousness by recognising the dependence on the master which could be Torvald her husband and the mainstream society that had been taking charge of her. The subordination of Nora leads to an awakening potential for emancipation. The context of Jasmine’s and Nora’s rebellion against the culturally imposed female position reflects their understanding and realisation that these expectations rely on their compliance and internalisation.

By contextualising the characters within their respective historical and cultural settings, the study will draw parallels and contrasts between the European and South Asian contexts. Hence this comprehensive study aims to reveal the layers of female control over their choices in being a part of the institution of marriage and to mainly take a holistic exit from these imposed marital and relational ties. Their journey through subjugation to empowerment provides a nuanced understanding of their ability to make autonomous choices, within patriarchal societies to entirely exit the marital binds and be free.

Results and Discussion

The study reveals the two contrasting journeys of the female protagonists of the novels *A Doll's House* and *Jasmine*. The journeys focus on investigating a few common elements. The study explains investigating the journey of two female protagonists bound by marital ties beyond their choice and how their journeys have empowered them to take an exit from the same marital ties they were bound to.

The study explored the journey of Nora's awareness of her powerless self.

Nora: *"I can't find anything to suit me. Everything seems so silly and meaningless"* (Ibsen, 1879)

Nora: *"We have now been married for eight years. Does it not strike you that tonight for the first time? We two, you and I, husband and wife, are speaking together seriously?"* (Ibsen, 1879)

Nora's shaken mind shows her unintentional resistance to the life she lives. She struggles to comprehend the reality of her life. Her inner mind searches for an escape while she physically struggles to be a dutiful wife. Yet finally the submerged pressure outburst with her intellectual comprehension of the bitter realities of her marriage.

Nora: *"I must first try to educate myself. In that, you are not the man to help me. I must set to work alone: you are not the man to help me with it. I must do it alone. And that is why I am going away from you now"* (Ibsen, 1879)

In *A Doll's House*, Nora's journey from subservience to self-realisation underscores the psychoanalytic struggle for identity. Her decision to prioritise her life over her family exemplifies her desire to win the struggle of being marginalised, controlled and recognised as non-human and to recognise self-worth and desire for freedom (Ibsen, 1879). This aligns well with Simon de Beauvoir's feminist perspectives that women must transcend their roles as "the other" to achieve authentic selfhood and autonomy (De Beauvoir, 1949) and Nora's transformation from a "doll" within her own home to an independent identity reflects the assertion that women need to resist societal norms that confines them to subordinate positions.

In contrast, *Jasmine* presents a more multifaceted exploration of autonomy. Jasmine's adaptability and resilience in the face of numerous adversities reflect a nuanced negotiation with patriarchal expectations (Mukherjee, 1989). Further, Nora undergoes a direct physiological exit of the marital bonds to own emancipation and to be empowered while Jasmine undergoes more of a psychological exit from these societal ties.

In a Hegelian analysis, Hegel's master-slave dialect describes the dynamic between a dominant master and a submissive slave figure. Hegel's complex elaborates that the subordinate position achieves self-consciousness through a complex process of recognition and resistance against the dominant forces that constrain their identities. Even though the master in the dominant position and the slave in the subordinate position require mutual interdependence for survival, the slave or the more subordinate position by opposing and negating the power of the dominant hand gains recognition (Potamias, 2024). The study explores how the female figure initially occupies a subordinate position in her community. The territorial shift she accompanies from her roots; Indian to America, discusses a psychological and a physical exit from her typical and dominating roots. She exits from the feudal expectations. Her acceptance of renaming from Jyoti to Jasmine allows her to explore self-consciousness. Further, her resistance to the acceptance of a traditional widow role explicates her rejection of the master's authority over her identity. Jasmine's breaking away from the psychological binds of marriage brings her empowerment, success, recognition, and an exit from a subordinate role affirming her right to define herself beyond the confinements of the institution of marriage and cultural expectations.

Conclusion and Recommendations

The study accentuates the choice that has been prioritised by the woman in the institution of marriage. When the woman did not have a choice to agree or disagree with her engagement in the institution of marriage, she was muted and restricted from having the power to choose life. The woman takes charge, and owns what was once prohibited; the power of choice. She who has been a captive of marriage chooses to break the marital binds that have been keeping her from achieving more desired and deserved things in life. The physiological and psychological exits that the woman processes direct her to new dimensions in life. She feels powerful, liberated and more of herself. The woman takes charge of navigating the values of patriarchal structures.

Hence, it is evident that both Nora and Jasmine exemplify the pursuit of autonomy through courageous choices, despite societal constraints. These narratives evoke the potential for women to achieve autonomy through self-awareness and determination and it evokes the possibility of women to be autonomous even when they are a part of the institution of marriage by making correct choices. They further reveal that the struggle for autonomy is not only a historical and cultural issue but a continuing challenge in contemporary society. The study suggests that modern women can draw inspiration from such characters to assert what is desired and deserved in their own lives. It provides

insights into the potential for the 21st-century woman to assert autonomy in being empowered financially, educationally and ideologically in their cohorts, irrespective of temporal situational and territorial disparities.

The future research scope can be developed to excavate how autonomy is negotiated in diverse cultural and socio-economic settings, how to empower women in institutionalised marriages being key holders of the existence of a society, and to investigate the power of choice of women through fields of education, careers, financial independence and support. Thus, this approach supports cultivating an environment where female autonomy is not just an inspiration but a realised practice.

References

- Butler, J. (1990). *Gender trouble*. Routledge.
- De Beauvoir, S. (1949). *The second sex*.
- Erten, M. U. (2013). Bharati Mukherjee's *Jasmine*: Cultural conflict and quest for identity. *Pamukkale Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 33-39.
- Haque, S. (2019). Re-thinking money as a determinant for strained marriage in Henrik Ibsen's *A Doll's House*. ResearchGate.
- Ibsen, H. (1879). *A doll's house*.
- Ibsen, H. (1989). *The doll's house: A play*. D. Appleton and Co.
- Mocbil, A. S. (2023). The portrayal of women in Henrik Ibsen's *A Doll's House*. ResearchGate.
- Mukherjee, B. (1989). *Jasmine*. Grove Press.
- Naiker, K. (2015). Changing names, changing places: The transformation of female identity through translocation in Bharati Mukherjee's *Jasmine*. *International Research Journal of Social Sciences - IARJ*, 7-11.
- Petersen, M. C. (2014). Suspended between worlds: Jasmine's liberal feminism. *Archives of the Faculty of Veterinary Medicine (UFRGS)*, 126-142.
- Potamias, S. (2024). The Hegelian master-slave dialectic in *History and class consciousness*. 10.

THE IMPACT OF SOCIAL CAPITAL ON ENGLISH LANGUAGE ACHIEVEMENT IN THE SRI LANKAN CONTEXT

M.A.J.D.D. Muthugala^{1*}, J.M.R.D. Jayakodi²

^{1, 2} Faculty of Graduate Studies, University of Sri Jayewardenepura

Abstract

Proficiency in the English language is considerably acknowledged as vital in society today, offering economic, social, and academic advantages. Its effects on social capital in the Sri Lankan context remain underexplored. Understanding this relationship is pivotal in shaping educational policies and practices to improve students' academic, social, and civic achievements. This study aims to investigate the relationship between English language proficiency and social capital among senior secondary government school students in Kegalle, Sri Lanka. It explores how accuracy influences students' communication skills, confidence, social connections, access to educational opportunities, and involvement in civic activities. Utilising a case study approach, fifty students were employed through convenience sampling. Data collection included background questionnaires, semi-structured interviews, observations, and secondary data. Findings demonstrate that mastering the English language notably enhances students' communication skills, confidence, and social connections. Proficiency in English also facilitates educational opportunities such as scholarships and foreign study programmes. Furthermore, it enables students to actively participate in civic activities, advocating for social causes within their communities. Enhanced communication skills, boosted confidence, and broadened social networks appear as direct impacts of English proficiency. Recommendations include prioritising English education and developing cultural exchange initiatives to further strengthen students and nurture their academic, social, and civic development.

Keywords: *Social Capital, English Language Achievement, Civic Development, Secondary School Student*

*Corresponding author: Tel.: +94(77)0747737; Email: jdmuthu473@gmail.com

Introduction

English language proficiency is widely recognised as a crucial skill in today's globalised world. The economic benefits of English language proficiency are well-documented, particularly in countries with growing service sectors and globalised economies (Crystal, 2003; Graddol, 2006). Mastery of the English language not only enhances academic and professional opportunities but also plays a significant role in shaping social interactions and networks. The influence of English proficiency extends far beyond the realms of academia and employment. It permeates various facets of daily life, profoundly shaping social interactions and networks in diverse cultural contexts. Moreover, the relationship between English language achievement and social capital assumes heightened relevance within the Sri Lankan context. Social capital, encompassing the networks, norms, and trust embedded within social relationships, is instrumental in facilitating individual and collective advancement. English proficiency not only enhances individuals' ability to engage with diverse social groups but also enables them to navigate complex social hierarchies and power dynamics. As such, the relationship between English language achievement and social capital is multifaceted, encompassing dimensions of inclusion, empowerment, and social cohesion. Social capital has been linked to various educational outcomes, including academic achievement, school engagement, and educational aspirations (Coleman, 1988; Putnam, 2000). It is suggested that students with strong social networks and supportive relationships are more likely to succeed academically and pursue higher education (McMillan & Chavis, 1986; Crosnoe, 2001). Language proficiency plays a crucial role in facilitating social integration and intercultural communication (Portes, 1998; Bourdieu, 1991).

In multicultural societies like Sri Lanka, English proficiency can serve as a bridge language, enabling individuals from diverse linguistic backgrounds to interact and collaborate effectively (Fishman, 1972; Vertovec, 2007). Schools play a central role in fostering social capital among students through various mechanisms, including extracurricular activities, peer interactions, and teacher-student relationships (Coleman, 1988; Putnam, 2000). The schools characterised by a positive school climate and strong social networks contribute to the development of social capital among students (Bryk, 2003; Battistich et al., 1997). In the Sri Lankan context, the intersection of English language proficiency and social capital presents a multifaceted challenge that warrants closer examination (Fernando & Siriwardena, 2020). Against this backdrop, examining the nexus between English language proficiency and social capital among government secondary school students in the Kegalle

District holds the main objective of this paper.

Material and Methods

The research was conducted within the framework of a broader investigation into "The Social Biographies of Students and School English Achievement: A Case Study of Government Senior Secondary School Students in Sri Lanka." Employing a case study design facilitated a thorough exploration of the specific context under investigation, namely, fifty senior secondary school students within the Kegalle Education Zone of the Sabaragamuwa Province in Sri Lanka were selected through convenience sampling. To execute the broader study, five government schools were chosen to gather data for research purposes. Students were randomly enlisted as participants in the study. A background information questionnaire, semi-structured interview, observation, and secondary data were used for data collection. Moreover, ten informants were selected randomly for interviews, Interviews were conducted in both English and Sinhala, audio recorded, and transcribed verbatim. To maintain ethical standards, each informant was assigned a pseudonym, and all identifying information was anonymised during data recording and presentation. Additionally, to ensure the validity and reliability of the questionnaire and the interview protocol, a separate group of five external individuals who were not in the research sample was also used. The ten interview transcripts underwent independent analysis by two researchers, employing both theory-driven and data-driven coding approaches. Initial findings were corroborated through triangulation with field observational notes and secondary data and analysed thematically to ensure robustness and credibility.

Results and Discussion

Initially, the collected data were systematically organised and categorised based on relevant themes and topics identified in alignment with the research objectives. These overarching themes served as the framework for further analysis, providing a structured approach to understanding the key insights derived from the data.

Enhanced Communication Skills: The mastery of the English language significantly contributed to improved communication skills among senior secondary government school students in Sri Lanka. Participants noted that proficiency in English facilitated effective interaction with peers, teachers, and other community members. One participant remarked, "English helps me to express my thoughts clearly and confidently, which makes it easier to connect with others in a relaxed manner." The widening of communication skills has

largely enforced language stability in developing countries. (Gupta, 2006).

Increased Confidence and Self-esteem: The acquisition of English language proficiency was observed to boost students' confidence levels and enhance their self-esteem. Participants expressed feeling more empowered to participate in classroom discussions and extracurricular activities. A student shared, "When I speak English fluently, I feel prouder and more confident about myself. It makes me believe that I can achieve anything I set my mind to." According to Bandura (1994), self-confidence can be prioritised in the needs of hierarchy related to the development of self-esteem oneself.

Expanded Social Networks: English language proficiency opened doors to broader social networks for the students. They reported forming friendships with peers from diverse linguistic and cultural backgrounds, both locally and globally. This expansion of social networks was perceived to enrich their overall social capital. One student mentioned, "Through English, I've made friends with students from different countries online. It has broadened my perspectives and given me insights into different cultures." As Gudykunst (2003) says moving with the social networks is very important when moving with the intercultural communities.

Access to Educational Opportunities: Proficiency in English was identified as a gateway to accessing higher educational opportunities, both within Sri Lanka and internationally. Students recognized that a strong command of the language increased their chances of securing scholarships and pursuing further studies abroad. A participant stated, "English proficiency is crucial for accessing quality education. It opens up opportunities for scholarships and study abroad programmes that would otherwise be out of reach." The most essential path for higher studies now tends to be how far the awardees are capable in the English language. This is due to the fact that most of the pedagogies are set in English as the medium of instruction (Cummins, 2000).

Empowerment for Civic Engagement: English language proficiency was perceived as empowering students to engage more actively in civic activities and community initiatives. Participants indicated that their ability to communicate proficiently in English enabled them to voice their opinions on social issues and participate in debates and forums. A student articulated, "English has strengthened me to advocate for issues that matter to me. I can participate in discussions and raise awareness about social issues within my community." Gaventa (2006) mentions that it genuinely creates opportunities for participation and the expression of citizen voices and heightened involvements within these spaces merely reinforce the existing establishment,

basically with the performance in the linking language.

Conclusion and Recommendations

This study underscores the profound impact of English language proficiency on senior secondary government school students in Sri Lanka. Enhanced communication skills, boosted confidence and expanded social networks are direct outcomes of English mastery. Moreover, proficiency in English facilitates access to higher educational opportunities, both locally and internationally, while also empowering students to engage actively in civic activities. Recommendations include prioritising English language education, promoting cultural exchange programmes, increasing scholarship opportunities, encouraging community engagement, and enhancing teacher training programmes. Implementation of these suggestions can further empower students, fostering their academic, social, and civic growth.

References

- Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). Academic Press.
- Battistich, V., Solomon, D., Watson, M., & Schaps, E. (1997). Caring school communities. *Educational psychologist*, 32(3), 137-151.
- Bourdieu, P. (1991). *Language and symbolic power*. Harvard University Press.
- Bryk, A. S. (2003). Trust in schools: A core resource for school reform. *Educational leadership*, 60(6), 40-40.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American journal of sociology*, 94, S95-S120.
- Crosnoe, R. (2001). Academic orientation and parental involvement in education during high school. *Sociology of education*, 210-230.
- Crystal, D. (2003). *English as a global language*. Cambridge University Press.
- Cummins, J. (2001). *Negotiating identities: Education for empowerment in a diverse society* (2nd ed.). California Association for Bilingual Education.
- Fernando, D., & Siriwardena, P. (2020). A critical evaluation of the implementation of the national English language policy of Sri Lanka: A case study of Sinhala medium schools in the Matara District. *Journal of Education and Vocational Research*, 11(1), 1-9.

Fishman, J. A. (1972). *The sociology of language: An interdisciplinary social science approach to language in society* (p. 4). Rowley: Newbury House Publishers.

Gaventa, J. (2006). Finding the spaces for change: A power analysis. *IDS Bulletin*, 37(6), 23-33.

Graddol, D. (2006). *English next* (Vol. 62). London: British Council.

Gudykunst, W. B., & Kim, Y. Y. (2003). *Communicating with strangers: An approach to intercultural communication* (4th ed.). McGraw-Hill.

Gupta, A. F. (2006). The importance of English in developing countries. *English Today*, 22(3), 3-12.

McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology*, 14(1), 6-23.

Portes, A. (1998). Social capital: Its origins and applications in contemporary society. *Annual Review of Sociology*, 24(1), 1-24.

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of the American community*. Simon and Schuster.

Vertovec, S. (2007). Super-diversity and its implications. *Ethnic and racial studies*, 30(6), 1024-1054.

CHINESE IDIOM ACQUISITION IN A NON-NATIVE CONTEXT: STRATEGIES AND CHALLENGES FOR SRI LANKAN CHINESE LANGUAGE LEARNERS

M.M.N.M. Lakmali^{1*}, N.G.D. Madhusanka²

¹ National Research Centre for Foreign Language Education,
Beijing Foreign Studies University

²Institute for International Communication of Chinese Culture,
Beijing Foreign Studies University

Abstract

Chinese idioms are integral to the Chinese vocabulary system, encapsulating cultural and historical values. Their complexity makes learning Chinese a challenging process, particularly for Sri Lankan undergraduates studying Chinese as a second language. These idioms, vital in both written and spoken forms, reflect unique cultural and psychological dimensions of Chinese heritage. This study examines the difficulties faced by students and teachers in acquiring Chinese idioms, focusing on challenges in the learning-teaching process. Using a mixed-method approach, data was collected through surveys of 50 undergraduates majoring in Chinese at Sri Lankan universities and structured interviews with 10 Chinese language lecturers and 10 students. Findings reveal key challenges, including the complexity of idioms, learner-specific issues, and limited awareness of idioms' significance, proficiency mismatches, insufficient native-language resources, and inadequate instruction in pragmatic usage. The study emphasises that addressing these issues through enhanced understanding and teaching strategies can improve idiom proficiency. Recommendations include fostering constructive teaching methods and mitigating obstacles to facilitate fluency in Chinese idioms in Sri Lanka.

Keywords: *Idioms, Challenges and Strategies, Sri Lankan Chinese Language Learners, Teaching Chinese as a Foreign Language, Second Language Acquisition (SLA)*

*Corresponding author: Email: nayomimadhushika@bfsu.edu.cn

Introduction

The acquisition of the Chinese language in the Sri Lankan sphere offered unique changes and complexities owing to the lack of exposure and cultural differentiations between both linguistic milieus. The official language of Sri Lanka is Sinhalese and it has a unique sentence structure and grammatical components that differ from the linguistic structures of the Chinese language as both languages resulted from different branches of language trees. In relation to cultural spheres, Sri Lanka is immensely influenced by traditional Indian cultural and social ethos while this exposure is relatively limited to China. Owing to these different cultural dispositions, it is challenging for Sri Lankan students to acquire exact pragmatic usage of the Chinese language specifically in pronunciation, vocabulary, grammar, Chinese characters and the cultural employment of the language.

On the contrary, interest and significance in the Chinese language is gradually growing in Sri Lanka owing to the significant role played by China in the Sri Lankan economy and other major sectors. In this regard, the knowledge and implication of Chinese idioms which is a major mechanism of communication is essential, especially in written communication. Chinese idioms are predominately employed with rich reflections of culture and traditional Chinese values. Due to the lack of exposure to authentic Chinese cultural instances, Sri Lankan students frequently find it difficult to pick up Chinese idioms (Yang Kai, 2020). Sri Lankan students primarily encounter idioms in formal classroom settings, which renders instruction more difficult than for students engaged in Chinese-speaking contexts who encounter idioms in everyday life. By investigating instructional strategies and the underlying causes of these issues, this study investigates the challenges Sri Lankan students encounter when learning Chinese idioms. In order to improve Sri Lankan students' ability to use Chinese idioms, the goal is to identify the precise challenges that students encounter and evaluate successful teaching methods.

The purpose of this study is to determine the challenges that university students in Sri Lanka encounter when learning and employing Chinese idioms. This study aims to advance the domains of language education and language acquisition, particularly in the context of idioms for non-native speakers, by examining these difficulties and the methods used by Chinese language learners.

This study will explore the following primary questions:

1. What specific obstacles and challenges do Chinese language learners face when learning and using Chinese idioms?
2. What strategies or recommendations can effectively address these challenges in idiom acquisition?

Material and Methods

This study employed a mixed-methods approach to investigate the challenges faced by university students in Sri Lanka in acquiring Chinese idioms, integrating both quantitative and qualitative data for a comprehensive analysis.

Questionnaire Method

A survey was distributed to fifty Chinese students studying in Sri Lankan public universities who completed more than two semesters of HSK levels 2, 3, 4, and 5 in order to learn more about their experiences, difficulties, and opinions about Chinese idioms. It contained both open-ended questions allowing students to describe their difficulties and offer suggestions for enhanced instructional strategies, as well as closed-ended questions to evaluate idiom frequency, comprehension, utilisation in communication, and the significance of cultural context.

Interview Method

Structured interviews were undertaken to acquire a deeper understanding of the difficulties of learning Chinese idioms after the questionnaire survey was completed. The sample size and interview selection criteria were carefully to ensure validity and diversity of viewpoints.

The interviews involved:

Lecturer Interviews: Ten Chinese language lecturers, both local and native, were interviewed based on their experience teaching Sri Lankan students. The interviews, conducted via Zoom, focused on their professional observations of the challenges students encounter in acquiring idioms.

Learner Interviews: Ten students who had no prior study experience in China were interviewed to gather insights into how students unfamiliar with the Chinese educational system and culture perceive idiom acquisition. This sample was selected to highlight learners facing cultural and linguistic barriers in learning idioms.

Results and Discussion

1. Questionnaire

As per major findings of the study, several drastic challenges that Sri Lankan students undergo in learning Chinese idioms, categorised into four main criteria based on collected data of the questionnaire survey.

1.1. Understanding the Importance of Learning Chinese Idioms

The identification of the significance of Chinese idioms in communication by students was rated as 60% rating their importance as 4 (important) or 5 (very important) on a 5-point scale. On the contrary, it is obvious that many undergraduates lacked a comprehensive understanding on the pragmatic employment of Chinese idioms to acquire language proficiency. As per findings of previous studies conducted on this scope articulates the necessity to have an exposure to the cultural significance amalgamated with Chinese idioms and including idiomatic expressions, is vital for language acquisition (Yang, 2020). It suggests the necessity to enhance awareness of students in of the cultural relevance of Chinese idioms which has a tendency to improve engagement and comprehension in Chinese.

1.2. Difficulties Related to Chinese Idioms

Many undergraduates have identified prominent challenges in the acquisition of Chinese idioms. As per the questionnaire survey, 45% of undergraduates rated their ease of comprehension as 1 (very difficult) or 2 (difficult). These challenges are increased when students are preparing for the HSK (level 3, 4, 5) examinations, and they frequently come across idioms they have not learnt or consider it difficult to apply them appropriately in context. According to research, students in non-native settings typically do not receive the contextual exposure required to acquire idiomatic idioms (Li & Wang, 2021), which underlines the need for improved instructional strategies.

1.3. Mismatch with Current Chinese Proficiency Levels

A considerable percentage of students which is 60% had manifested the lack of pragmatic importance of Chinese idioms in real –life communication. Majority of students stated that the idioms taught in their courses deviate from their proficiency levels that makes the acquisition is complex and multi-faceted. This discrepancy causes annoyance and a lack of trust in one's ability to use Chinese idioms successfully. Huang (2019) asserts that adjusting language training to students' competence levels is essential to promote successful language acquisition, highlighting the significance of aligning teaching of Chinese idioms to skills and competency levels of students.

1.4. Insufficient Teacher Instruction and Usage

The rating of 70% of the sample indicating the inadequate explanations and contextual and pragmatic usage of Chinese idioms was identified as a major concern. This evidenced the immediate necessity of curriculum development, which deviates from preparing students for the idiomatic challenges encountered in HSK examinations. As identified by Chen (2020), effective instruction on Chinese idioms is incorporated with teaching the idioms themselves by offering practical examples and evidence of pragmatic usage in authentic contexts.

Based on the questionnaire findings, Sri Lankan students face significant challenges in understanding and using Chinese idioms. These difficulties stem largely from insufficient contextual exposure, a mismatch between idiom instruction and students' proficiency levels, and inadequate instructional support.

2. Teachers Interview

Table 1:
Data Encoding and Examples (Teachers)

Obstacles	Typical Quotes
Varying student interest	"The interest in Chinese idioms among Sri Lankan learners varies, with some being fascinated while others find them challenging or prioritize differently."
Ineffective teaching methods	"I usually use the direct translation method" and sometimes provide example sentences.
Insufficient proficiency levels	"If I describe the meaning of idioms in Sinhala, they can understand; however, they are unable to comprehend the meaning on their own or describe it in the Chinese language."
Limited focus on explanation	"Due to time constraints in the lesson, I do not delve deeply into explaining idioms. Instead, I provide a literal meaning and an example"

Persistent
challenges in
teaching idioms

“The most challenging aspects of teaching idioms are conveying cultural context and promoting natural usage through continuous practice.”

3. Students Interview

Table 2:

Data Encoding and Examples (Students)

Obstacles	Typical Quotes
Cultural difference	“Chinese idioms are deeply rooted in Chinese culture, and sometimes it's challenging for me to fully grasp their meanings without having a deep understanding of Chinese history, traditions, and values”
Language barriers	“Many times, I struggle with pronouncing idioms correctly, resulting in misunderstandings of my intended meaning.”
Deciphering non-literal meanings	“One challenge I face is understanding the figurative language used in idioms. Sometimes, the literal translation doesn't reveal the intended meaning, and it takes time to grasp the metaphor or symbol being conveyed.”
Insufficient time allocated for each idiom	“The teacher only teaches the meaning of the idiom but doesn't provide guidance on how to use it in real-life situations.”
Limited resources in the students' native language	“Most of the learning materials are in English or Chinese, which can be difficult for me to comprehend fully.”
Lack of active participation and motivation	“The teacher doesn't allow us to create sentences using idioms and correct them.”

“I find Chinese class boring, so I didn't pay attention to the teacher.”

“Most of the time, the teacher only allows bright students to ask questions, and even though idioms are challenging, I personally hesitate to ask questions.”

Through the teachers and students interviews we can identify the obstacles that they face. They can categorize as complexity of the Chinese idioms, barriers of native language transferring, cultural differences, problems with teaching methods and strategies, lack of student's motivation etc.

4. Factors Contributing to the Challenges

The challenges faced by Sri Lankan students in learning Chinese idioms can be attributed to several key factors:

4.1. Complexity of Chinese Idioms

Chinese idioms, present unique challenges for learners due to both linguistic and cultural factors. According to Zhang (2009), several reasons contribute to these difficulties:

1. Idioms function more like individual words than English idioms, making them more readily used in conversation.
2. Idioms can serve multiple grammatical roles, allowing for greater versatility in their application compared to English idioms.
3. Many idioms hold significant cultural status, having been treasured and preserved over time.
4. Idioms are often used to demonstrate erudition, while English speakers may tend to discard older expressions.

Moreover, four-character idioms hold a significant role, particularly in formal writing (Cui, 2004). In student interviews, some participants highlighted that ‘Cultural differences’ and ‘Language barriers’ affect their ability to acquire idioms effectively.

4.2. Learner-Related Factors

Learning Chinese idioms exhibits a variety of difficulties for students, most of

which are learner-related. The complexity of idioms, which are full of cultural knowledge, require a lot of effort to comprehend and it causes anxiety in students. The comprehension is further complicated by a lack of familiarity with Classical Chinese that many of these idioms originate. Furthermore, the lack of cultural contextual knowledge makes it even harder for students to understand the cultural and historical meanings of idioms. Because of this 'cultural gap,' which results from a lack of exposure to the distinctive cognitive patterns and values of Chinese culture, students find it challenging to fully connect and effectively employ idioms in language practice (Bai.X, 2020).

4.3. Teacher-Related Factors

Structured interviews conducted with teachers exemplify several factors that affect idiom instruction in Chinese language education.

Idioms are frequently neglected in textbooks, dictionaries, and syllabuses, which minimises students' practice and exposure. According to earlier studies, students find it difficult to comprehend and use idiomatic terms successfully when they are not adequately incorporated into the language curriculum (Chen & Yang, 2021; Liu, 2019). This is supported by the findings we obtained, which indicate that 45% of students struggled because of insufficient instructional support and 60% of students reported having limited chances to acquire idioms in the Sri Lankan context.

According to Zhang (2020), a lot of teachers of Chinese as a foreign language (TCFL) also lack the cultural understanding required for effective idiom instruction. Because of this lack of cultural awareness, 35% of students find it difficult to understand the complex meanings that are necessary for using idioms. Interviews with students also revealed that idiom acquisition was adversely affected by teachers' lack of enthusiasm and the amount of time spent on each idiom. Since motivation is essential for language learning, teachers are encouraged to underline the value of idioms and motivate their students. The findings underscore the necessity of more resources and focused teacher preparation to raise the standard and effectiveness of idiomatic education.

4.4. Limited Understanding of the Importance of Idioms

A significant portion of students (40%) are unaware of the role idioms in achieving fluency and cultural nuances in Chinese. This lack of awareness often leads to reduced motivation to actively learn and apply idioms in the real-life communication in Chinese language.

4.5. Mismatch with Proficiency Level

Idioms are frequently taught at a level that could differ to the linguistic proficiency of the students. Learners find it challenging to understand and successfully use idioms because of this mismatch, especially in the absence of constant developments in vocabulary and grammar.

4.6. Lack of Resources in Native Language

Moreover, the unavailability of adequate number of resources to explaining Chinese idioms in students' native languages (Sinhala or Tamil) has become a catalyst in hindering the ability to completely understand the context, meaning, and application of idioms in Chinese.

4.7. Insufficient Instruction and Usage by Teachers

Chinese idioms are crucial for communication and should not be disregarded as a method of advancing students' fluency (Lisa, 2011). Nonetheless, a lot of teachers could fail to place sufficient emphasis on idioms or may not provide sufficient context and explanations. As a result, undergraduates could not understand the correct employment of idioms in both written and spoken Chinese. The absence of supervised usage additionally restricts the capacity of students to internalise and practice idiomatic terms.

These factors collectively impact the effectiveness of idiom learning among Sri Lankan students, articulating distinct are in which targeted instructional strategies and resource development could help bridge the gap in understanding and application of Chinese idioms in accurate and authentic realms.

Conclusion and Recommendations

For Teachers

Teachers are essential in promoting the study of Chinese idioms. In order to help students, comprehend the manner to employ idioms in the future, they should stress the importance of idioms to develop fluency and effective communication. Employing modern and engaging teaching methods, such as storytelling (故事法), drawing and guessing (你画我猜), and acting and guessing (你演我猜), can make the learning process more enjoyable.

Moreover, the employment of multimedia resources can also improve understanding of idioms by Sri Lankan students. It further contributes imperatively to educators in Sri Lanka provide idiom-focused learning resources and update the university curriculum in order to make idiom study a

core part of the curriculum. To promote effective learning, teachers should also modify their teaching methods based on the competency levels of their students.

For Students

The understanding Chinese idioms is important for language development; thus, students should make it a priority to master them. Effective communication requires an understanding of cultural and historical context of idioms. Students can improve their overall language ability by investing sufficient energy and time into learning idiomatic expressions. They will be able to use Chinese more effectively and fluently when they focus on idioms in their Chinese language practice.

References

- Bai, X. (2020). 对外汉语成语教学探究 [Exploration of teaching Chinese idioms to foreign learners]. *河南教育学院学报 (哲学社会科学版)* [*Journal of Henan Institute of Education (Philosophy and Social Sciences Edition)*], 39(3), 119-124. <https://doi.org/10.13892/j.cnki.cn41-1093/i.2020.03.022>
- Chen, X. (2020). Teaching idioms in the context of Chinese language learning: Strategies and challenges. *Journal of Language Teaching and Research*, 11(5), 781-789.
- Conti, S. (2017). Chengyu in Chinese language teaching: A preliminary analysis of Italian learners' data. *Irish Journal of Asian Studies*, 3, 59-82.
- Huang, Y. (2019). Tailoring language instruction to learner proficiency: Implications for teaching practice. *International Journal of Educational Research*, 98, 101-110.
- Li, J., & Wang, H. (2021). Cultural context and idiomatic understanding in language learning. *Asian Pacific Journal of Education*, 41(1), 64-78.
- Lisa, T. (2011). Chinese idioms (chéng-yǔ) for second-language learners: Toward a pedagogical approach (Master's thesis, University of Oregon).
- Luân, T. P., & Dat, L. T. (2021). Idiom teaching strategies and teachers' and students' perceptions of teaching and learning English idioms. *Dong Nai University Journal of Science*, 20, 71-87.
- Stellard, L. (2011). Chinese Idioms (Cheng-yu) for Second-Language Learners: Toward a pedagogical approach (Doctoral dissertation, University

of Oregon).

Wang, W. (2016). Brief analysis of teaching ways of Chinese idioms in teaching Chinese as a foreign language.

Wen, L. (2021, December). Research on the teaching methods of English idiom chunks in college English. In *7th Annual International Conference on Social Science and Contemporary Humanity Development (SSCHD 2021)* (pp. 156-160). Atlantis Press.

Yang, K. (2020). The role of cultural knowledge in learning Chinese as a foreign language. *Language Learning & Technology*, 24(1), 4-18.

THE IMPACT OF NATIVE LANGUAGE INTERFERENCE ON PHONOLOGICAL ERRORS IN SRI LANKAN ENGLISH SPEAKERS IN THE COLOMBO DISTRICT

W.A.C. Ishara*¹, B.A.S.S. Mendis², W.A.P. Sandeepanie³, A.U. Kottahachchi⁴
^{1,2,3,4} University of Kelaniya

Abstract

This research explores phonological errors in the pronunciation of consonant clusters among Sri Lankan English (L2) speakers, focusing on the insertion of the high vowel /i/ before these clusters, influenced by Sinhala (L1) phonological patterns. The objective is to identify the underlying reasons for this error, which include lack of exposure, awareness, proper guidance, motivation, age of learning, and the influence of loan words. The significance of the study lies in its potential to inform language instruction strategies that address these specific issues, thereby improving English pronunciation among Sinhala speakers. Findings indicate that these factors collectively contribute to the prevalent phonological error, necessitating a multifaceted approach to language teaching. The study concludes that targeted interventions are essential to mitigate L1 interference and enhance English pronunciation skills in Sri Lankan learners.

Keywords: *Consonant Clusters, English Pronunciation, Phonological Errors, L1 Interference, Sinhala Speakers*

*Corresponding author: Tel.: (+94) 77 637 0518; Email: chamariwanniarachchi1998@gmail.com

Introduction

L1 interference significantly influences phonological errors among Sri Lankan English (L2) speakers, especially in the pronunciation of consonant clusters. This research investigates how the high vowel /i/ is used as a strategy to adapt English consonant clusters to fit Sinhala phonological patterns, demonstrating intra-sentential code-mixing. Sinhala speakers often insert the vowel /i/ before consonant clusters in English words, influenced by various factors. This incorporation results in phonological errors, as the vowel /i/ is incorrectly pronounced, reflecting the profound impact of L1 on L2 phonology. Understanding these factors provides insights into the challenges faced by Sri Lankan speakers and underscores the need for targeted language instruction to mitigate L1 interference.

Material and Methods

The study involved 30 Advanced Level students from Colombo, all with a B1 proficiency in English. This targeted group allows for an analysis of phonological interference at a proficiency level where L1 influences on L2 pronunciation remain pronounced despite formal English education.

This study uses a mixed-method approach, the research gathered quantitative data through questionnaires about students' English exposure and qualitative data to understand the nature of pronunciation errors. This dual approach provides both statistical evidence and context-rich insights.

A pilot test identified key phonemic deviations, and results were interpreted through frameworks such as Muysken's code-mixing typology. Using a pilot test to detect initial phonological issues is critical in ensuring that the study focuses on relevant phonetic challenges. Flege & MacKay (2004) suggest that pilot testing can pinpoint specific phonemic deviations influenced by the native language, which is essential in environments where the L1 and L2 phonologies are markedly different, as with Sinhala and English. Pilot tests help tailor subsequent data collection, focusing on the most common and impactful errors, thereby improving the reliability of findings.

This mixed-method approach ensured a thorough understanding of the phonological challenges faced, strengthening the study's conclusions on the effects of Sinhala on English phonology among Colombo students. Colombo is an ideal setting for studying phonological errors in English pronunciation among Sinhala speakers due to its unique bilingual context. According to Guneseckera (2005), the urban environment in Colombo exposes students to both Sinhala and English, but English is often limited to formal settings, which

restricts practical, conversational use. This limited exposure aligns with findings from Munasinghe (2018), who noted that urban Sri Lankan students exhibit English proficiency primarily within academic contexts, which often lacks natural pronunciation practice. Consequently, even in Colombo, L1 interference remains prevalent in English pronunciation, especially in phonological areas like consonant clusters where Sinhala phonetic patterns dominate. The mixed-method approach is widely recommended for language acquisition studies, as it allows for both statistical and narrative data to capture the complexities of phonological errors. Dörnyei (2007) highlights that combining quantitative and qualitative data provides a more comprehensive view of language learning challenges, particularly in understanding the specific causes of L1 interference in L2 learning. This aligns with Mackey & Gass (2015), who emphasise that a combination of surveys and in-depth interviews can reveal the nuances of phonological adaptation and pronunciation issues, allowing for robust conclusions.

Interpreting results through Muysken's (2000) typology of code-mixing is appropriate for bilingual contexts like Sri Lanka, where Sinhala speakers incorporate native phonological elements into English. This framework, as applied in Senaratne (2014), categorises phonological adaptation in bilingual settings as a form of nativisation rather than simple borrowing, providing a theoretical foundation for analysing phonological errors such as the insertion of the vowel /i/ before consonant clusters.

The focus on young adults aligns with the Critical Period Hypothesis (Lenneberg, 1967), which posits that acquiring native-like pronunciation is more challenging after adolescence due to reduced neural plasticity. This supports the inclusion of older adolescent students, whose phonological systems are less flexible, making them more prone to L1 interference when pronouncing non-native consonant clusters. This age-related factor is echoed by Birdsong (2006), who argues that the impact of L1 on L2 pronunciation is more pronounced in older learners, emphasising the need for targeted pronunciation interventions in post-adolescent language education.

Results and Discussion

The main reason for the incorporation of the high vowel /i/ in front of consonant clusters /sk/, /sp/, /sm/, and /st/ in words like 'school', 'spoon', 'smile', and 'station' when they are used in predominantly Sinhala utterances is the process of nativisation. This phenomenon is explained through the lens of Muysken's typology of code-mixing (CM) and is referred to as "Sinhalisations" rather than borrowings or code mixes (Senaratne, 2014).

The incorporation of the high vowel /i/ before consonant clusters in English words by Sinhala speakers can be related to the lack of exposure, lack of awareness, proper guidance, and the age of learning, motivation, and loan words in several ways.

Lack of Exposure: The theme of lack of exposure was investigated through questions about the participants' daily use and listening habits related to the English language. Although these students studied in an English medium for their A/Ls, their daily communication in English outside the classroom setting was limited.

Question 1: What percentage of the time do you listen to the English language daily compared to your mother tongue?

Question 2: What percentage of the time do you use the English language to communicate daily compared to your mother tongue?

Table 1:

Percentage of Daily Communication in English vs. Mother Tongue

Participant (%)	English (%)	Mother tongue (%)
1	15	85
2	10	90
3	20	80
4	18	82
5	12	88
...
30	14	86

Table 1 reveals that they communicate in English significantly less frequently compared to their mother tongue. Most participants indicated that they use English less than 20% of the time in their daily interactions. This discrepancy suggests that while passive exposure to English is high, active use is limited, primarily confined to academic settings. Such limited active engagement with English could contribute to the persistence of pronunciation errors, as there is less practice and reinforcement of correct pronunciation in natural, conversational contexts.

Awareness: The lack of awareness theme was explored through questions regarding participants' knowledge of pronunciation rules and feedback received on their errors.

Question 3: Do you pronounce the word "school" as "/isku:l "?

Question 4: Are you aware that adding an "i" sound before the /s/ consonant in words like "school" and "study" is incorrect?

Question 5: Have you ever been corrected when you pronounce "school" as "/isku:l/" or "study" as “/’istʌdi/”?

Table 3:

Pronunciation of "School" as "/isku:l "

Participant	Pronounce "/isku:l " (Yes/No)
1	Yes
2	Yes
3	Yes
4	No
5	Yes
...	...
30	Yes

Table 4:

Awareness of Incorrect Pronunciation

Participant	Pronounce "/isku:l " (Yes/No)
1	Yes
2	Yes
3	Yes
4	Yes
5	Yes
...	...
30	Yes

Table 3 indicates that a significant number of respondents (90%) acknowledged pronouncing words like "school" and "study" with an initial "i" sound. Despite this awareness, as shown in Table 4, 80% of the respondents admitted they were aware of this pronunciation being incorrect.

Lack of Proper Guidance: Flege (1992), Rochet (1995), and Flege & MacKay (2004) discovered that learners fail to perceive the phonetic differences between L1 sounds and corresponding L2 sounds as they fail to modify previously established phonetic categories without proper instruction.

Proper phonetic training is crucial for mastering the pronunciation of foreign sounds. In many cases, English language instruction in Sri Lanka may not provide adequate emphasis on the correct articulation of consonant clusters that are not native to Sinhala.

Moreover, the proficiency and training of English teachers play a significant role in guiding proper pronunciation. If teachers themselves are not well-versed in English phonetics or if they exhibit similar phonological adaptations, students are likely to imitate these patterns. Continuous feedback and practice are vital for improving pronunciation. Without proper guidance, students

might not receive enough opportunities for practice or corrective feedback, leading to the reinforcement of incorrect pronunciation habits.

Age of Learning: The Critical Period Hypothesis suggests that there is an optimal window for acquiring native-like pronunciation, typically before puberty. If English learning begins after this critical period, learners may find it more challenging to overcome the phonological patterns of their first language.

Starting English education at a younger age can help learners more easily acquire and internalise the phonetic distinctions between English and Sinhala, reducing the likelihood of inserting an extra vowel. Younger learners are generally more adept at mimicking new sounds and can achieve more accurate pronunciation with sufficient exposure. Delayed exposure to English can lead to stronger interference from the native language's phonological system.

Motivation: Motivation is a crucial factor in language learning success, with integrative and instrumental motivations playing significant roles. Gardner (1985) explains that integrative motivation involves a desire to integrate with the target language community, while instrumental motivation is driven by practical benefits such as career advancement. In the context of Sri Lankan English learners, students who are instrumentally motivated may be driven by the need to excel in their academic pursuits or to secure better job opportunities. This type of motivation can lead to a greater focus on mastering English pronunciation to meet these goals.

Motivated learners often engage in self-regulated learning, using resources such as language learning apps, online courses, and pronunciation guides. Zimmerman (2008) emphasises that self-regulated learners set goals, monitor their progress, and adjust their strategies to achieve better outcomes. In Sri Lanka, a motivated learner might use online platforms like Duolingo or YouTube channels focused on English pronunciation to improve their skills outside the classroom, helping to mitigate the influence of Sinhala phonological rules. Motivation significantly impacts language learning success, with integrative and instrumental motivations being key factors (Gardner, 1985). Motivated learners exhibit greater persistence and self-regulation, leading to improved pronunciation (Dörnyei, 2005 & Zimmerman, 2008).

Loan Words: Loan words often retain their original phonological structures, influencing L2 pronunciation patterns. Paradis (1996) explains that when words are borrowed from one language to another, they frequently carry over their phonetic characteristics, which can interfere with the native

pronunciation rules of the second language. In Sri Lankan English, words like "bus" and "bank" are borrowed from English and integrated into Sinhala with slight phonological modifications. When these words are used in English contexts, learners might inadvertently apply the adapted pronunciation, resulting in phonological errors.

Learners may overgeneralise the phonetic rules of loan words to other English words. This can lead to consistent phonological errors, especially when the loan words have become deeply embedded in the native language. A common issue among Sri Lankan English speakers is the pronunciation of the English word "school" as /isku:l/, due to the adaptation of the English consonant cluster /sk/ to include an initial vowel, a feature present in the adapted loan word usage in Sinhala.

Loan words often retain their original phonological structures, affecting L2 pronunciation (Paradis, 1996). The frequent use and phonetic overgeneralisation of loan words can reinforce incorrect pronunciation habits in learners (Gou, 2004).

Conclusion and Recommendations

To improve English pronunciation among Sinhala speakers, increasing active daily communication in English is essential, ensuring more practice and usage. Raising awareness about common pronunciation errors and providing consistent corrective feedback is crucial. Comprehensive phonetic training should be offered, with teachers well-versed in English phonetics. Starting English education early can leverage the critical period for language learning. Additionally, fostering both integrative and instrumental motivation will drive persistent learning. Lastly, educating learners about the impact of loan words and promoting correct English phonological patterns can mitigate pronunciation issues.

In conclusion, the insertion of the high vowel /i/ before consonant clusters in English words by Sinhala speakers is primarily due to nativisation and insufficient exposure, awareness, guidance, and motivation. Addressing these issues through increased practice, phonetic training, and motivation can significantly improve pronunciation accuracy.

References

Bai, X. (2020). 对外汉语成语教学探究 [Exploration of teaching Chinese idioms to foreign learners]. *河南教育学院学报 (哲学社会科学版)* [*Journal of Henan Institute of Education (Philosophy and Social Sciences)*]

Edition)], 39(3), 119-124. <https://doi.org/10.13892/j.cnki.cn41-1093/i.2020.03.022>

Chen, X. (2020). Teaching idioms in the context of Chinese language learning: Strategies and challenges. *Journal of Language Teaching and Research*, 11(5), 781-789.

Conti, S. (2017). Chengyu in Chinese language teaching: A preliminary analysis of Italian learners' data. *Irish Journal of Asian Studies*, 3, 59-82.

Huang, Y. (2019). Tailoring language instruction to learner proficiency: Implications for teaching practice. *International Journal of Educational Research*, 98, 101-110.

Li, J., & Wang, H. (2021). Cultural context and idiomatic understanding in language learning. *Asian Pacific Journal of Education*, 41(1), 64-78.

Lisa, T. (2011). Chinese idioms (chéng-yǔ) for second-language learners: Toward a pedagogical approach (Master's thesis, University of Oregon).

Luân, T. P., & Dat, L. T. (2021). Idiom teaching strategies and teachers' and students' perceptions of teaching and learning English idioms. *Dong Nai University Journal of Science*, 20, 71-87.

Stellard, L. (2011). Chinese Idioms (Cheng-yu) for Second-Language Learners: Toward a pedagogical approach (Doctoral dissertation, University of Oregon).

Wang, W. (2016). Brief analysis of teaching ways of Chinese idioms in teaching Chinese as a foreign language.

Wen, L. (2021, December). Research on the teaching methods of English idiom chunks in college English. In *7th Annual International Conference on Social Science and Contemporary Humanity Development (SSCHD 2021)* (pp. 156-160). Atlantis Press.

Yang, K. (2020). The role of cultural knowledge in learning Chinese as a foreign language. *Language Learning & Technology*, 24(1), 4-18.

CROSS-CULTURAL ADAPTATION OF NATIVE CHINESE TEACHERS IN SRI LANKA: CHALLENGES AND STRATEGIES

N.G.D. Madhusanka*¹ M.M.N.M. Lakmali²

¹*Institute for International Communication of Chinese Culture*

²*Beijing Foreign Studies University¹; National Research Centre for Foreign Language Education
Beijing Foreign Studies University*

Abstract

This qualitative study aimed to explore the cross-cultural adaptation experiences of native Chinese teachers working in Sri Lanka. A total of twenty native Chinese teachers with previous and recent work experience were interviewed to investigate the challenges they encountered, the strategies they employed, and the factors that influenced their adaptation process. The findings revealed that primary challenges encompassed language barriers, cultural differences, and professional difficulties. To overcome these challenges, teachers actively engage in language learning, immerse themselves in local culture, and seek support from colleagues and the broader Chinese community. The results of this study underscore the necessity for a comprehensive support system and integration of cross-cultural competencies into teacher training programmes to facilitate successful adaptation among international educators. This research contributes significantly to existing literature on cross-cultural adaptation by providing valuable insights into the unique experiences encountered by Chinese teachers in Sri Lanka.

Keywords: *Teaching Chinese as a Foreign Language, Cross-Cultural Adaptation, Native Chinese Teachers, Cultural Differences, Teacher Training*

*Corresponding author: Email: dilanmadhusanka2018@gmail.com;

Introduction

The increasing global mobility of teachers has led to a growing need for effective cross-cultural adaptation strategies. In recent years, Sri Lanka has seen a significant influx of Chinese teachers in the field of teaching the Chinese language through Confucius Institutes and classrooms in Sri Lanka. However, the cultural differences between Sri Lanka and China can pose significant challenges for these Chinese teachers, who must adapt to a new work environment, cultural norms, and social expectations.

Cross-cultural adaptation is a complex and multifaceted process that involves not only an individual's ability to adapt to a new cultural context but also cultural differences between the sending and receiving countries. Despite the growing importance of cross-cultural adaptation, there is a lack of research on the experiences of Chinese teachers in Sri Lanka, particularly in terms of the challenges they face and the strategies they employ to adapt to their new environment.

This study aims to address this research gap by exploring the cross-cultural adaptation experiences of Chinese teachers in Sri Lanka. Specifically, it seeks to investigate the challenges faced by Chinese teachers in adapting to the Sri Lankan educational system and culture, and the strategies they use to overcome these challenges. The study will also examine the role of individual and organisational factors in facilitating or hindering cross-cultural adaptation.

Research Questions

1. What are the primary challenges faced by Chinese teachers in adapting to the Sri Lankan education system and culture?
2. How do Chinese teachers adapt to the cultural differences in Sri Lanka, and what strategies do they use to overcome these challenges?
3. What individual and organisational factors influence the cross-cultural adaptation of Chinese teachers in Sri Lanka, and how do these factors impact their overall experience?
4. What are the implications of these findings for policymakers, educators, and administrators in Sri Lanka and China, and how can they support the cross-cultural adaptation of Chinese teachers in Sri Lanka?

Material and Methods

Research Design

This study employs a qualitative research design, utilising in-depth interviews to gather data on the cross-cultural adaptation experiences of Native Chinese teachers in Sri Lanka.

Participants

This study examines a sample of 20 native Chinese teachers who have prior experience teaching in Sri Lanka and are currently instructing Sri Lankan students at two Confucius Institutes and two Confucius Classrooms in Sri Lanka.

Data Collection

The interview protocol will be designed to explore the following themes:

1. Cross-cultural adaptation experiences: Participants will be asked to share their experiences of adapting to the Sri Lankan education system and culture.
2. Challenges and barriers: Participants will be asked to discuss the challenges and barriers they have faced in adapting to the new environment.
3. Strategies and coping mechanisms: Participants will be asked to share the strategies and coping mechanisms they have employed to overcome these challenges.
4. Individual and organisational factors: Participants will be asked to discuss the individual and organisational factors that have influenced their cross-cultural adaptation.

Data Analysis

Data from the interviews were analysed using thematic analysis to uncover patterns related to cross-cultural adaptation challenges and coping strategies among Chinese teachers in Sri Lanka. Transcriptions were reviewed, and NVivo software was used to code responses, grouping them into themes such as language and communication barriers, cultural differences, and professional challenges. Additional themes emerged around adaptation strategies, including language learning, cultural immersion, and support networks. These themes were refined and interpreted in the context of adaptation theory to understand how teachers navigated language barriers, adjusted to cultural differences, and built supportive connections to ease their integration.

Results and Discussion

Challenges in Cross-Cultural Adaptation

Language and Communication Barriers

A prominent challenge encountered by native Chinese teachers in Sri Lanka is the language barrier, particularly when attempting to communicate with students and colleagues who primarily speak Sinhala. Beyond basic communication issues, several teachers described the specific impact this had on their teaching effectiveness and personal interactions. A unique insight from this study is that the language barrier affected their ability to interpret cultural nuances within conversations, leading to misunderstandings that went beyond the classroom. Participants indicated that these communication challenges also impacted their confidence in interacting socially within the community.

"The language difference was the biggest challenge for me. It was more than just communicating my instructions; I couldn't always grasp the underlying meanings or local expressions, even when the students translated."

(Participant 4)

"The language difference was the biggest challenge for me. I had a hard time understanding the local language and communicating my instructions and expectations to the students. Sometimes I explain the lesson in English. But some of the students also have a poor knowledge of English"

(Participant 12)

The language barrier not only impairs their ability to teach effectively but also hinders their social integration and daily interactions outside the classroom. Several participants expressed frustration at their inability to engage in casual conversation or understand local customs and norms.

Cultural Differences and Adaptability

The native Chinese teachers also struggled to adapt to the cultural differences between China and Sri Lanka. Participants reported challenges in understanding and navigating the social hierarchies, communication styles, and educational practices in the Sri Lankan context.

"In Sri Lanka, students seem hesitant to speak up or question. I had to change my approach entirely to adapt, but I still don't feel like I fully understand the 'right way' to engage them."

(Participant 7)

"The way students interact with teachers in Sri Lanka is very different from what I'm used to in China. Here, the students are more reserved and less likely to ask questions or challenge the teacher's authority."

(Participant 18)

The teachers also had to adjust to the slower pace of life and the more relaxed attitudes towards time management in Sri Lanka, which contrasted with the fast-paced and highly structured work culture they were accustomed to in China.

Professional Challenges

Another unique aspect reported in this study is the challenge of adapting Chinese teaching materials to meet the expectations and learning styles of Sri Lankan students. Many teachers indicated that the curriculum they brought from China was sometimes overly advanced or irrelevant, requiring extensive modification to align with local standards. Unlike other research, this study found that teachers had to regularly revise not only the content but also assessment methods to ensure they were culturally appropriate, especially in subjects that involved discussing sensitive topics, such as historical perspectives or social issues.

"The curriculum and teaching materials I brought from China were not always relevant or appropriate for the Sri Lankan context. I had to spend a lot of time modifying my lessons and assessments to better suit the needs of my students."

(Participant 3)

"When I first started using materials from China, I noticed they didn't always resonate with my students here. Some topics felt disconnected from their experiences or were too complex for their current level. I had to simplify some sections and even replace certain examples with local references so they could relate better. For instance, historical events that are well-known in China aren't familiar here, so I adapted those lessons with examples from Sri Lankan history, which made a big difference in their engagement."

(Participant 15)

This reflects a significant professional adaptation not often explored in existing studies on cross-cultural education, where the need to adapt assessments to cultural sensitivities in the host country is a largely overlooked yet critical component.

Strategies for Cross-Cultural Adaptation

Language Learning and Intercultural Communication

To overcome the language and communication barriers, the Chinese teachers employed various strategies. Many participants are actively engaged in learning the local language Sinhala through formal classes and self-study. They also seek opportunities to practice their language skills with students, colleagues, and members of the local community.

"I made a conscious effort to learn Sinhala. I take language classes at night and try to use the new words and phrases I learn in my daily interactions. It really helped me to communicate better and connect with the people around me."

(Participant 5)

In addition to language learning, teachers develop intercultural communication skills, such as paying more attention to nonverbal cues, adjusting their communication styles, and seeking clarification when needed.

Cultural Immersion and Adaptation

To adapt to the cultural differences, Chinese teachers engage in various cultural immersion activities. They attend local festivals, religious ceremonies and social events to better understand the Sri Lankan way of life. Some teachers also seek mentors or local guides who can provide insights and advice on navigating the cultural landscape.

"I tried to attend local cultural events and festivals. It was a great way to learn about the traditions and customs, and it also helped me to feel more connected to the community."

(Participant 18)

Teachers also demonstrated flexibility and adaptability in their approach to teaching and professional practice, adapting their methods and expectations to better align with the Sri Lankan educational context.

Seeking Support and Building Connections

The Chinese teachers recognised the importance of seeking support and building connections within their new environment. Many participants actively engaged with their colleagues, both Chinese and Sri Lankan, to share experiences, seek advice, and collaborate on teaching and professional development activities.

"Having a strong support network, both within the school and the broader Chinese community in Sri Lanka, was crucial for me. We could share our challenges, learn from each other, and find ways to cope with the difficulties"

we faced."

(Participant 9)

Implications and Recommendations

Implications for Policymakers and Administrators

The results highlight the need for comprehensive support systems and resources to facilitate the cross-cultural adaptation of international teachers. This may include language training programmes, cultural orientation workshops, and mentorship initiatives to help teachers navigate the challenges they face.

Policymakers and administrators should also consider developing more robust recruitment and onboarding processes for international teachers, ensuring that they are well-prepared for the cultural and professional differences they will encounter.

Implications for Educators and Teacher Training

The study's findings underscore the importance of incorporating cross-cultural competencies into teacher training programmes, both in China and Sri Lanka. This may involve exposing pre-service teachers to diverse cultural contexts, teaching them the strategies for effective intercultural communication, and helping them develop the flexibility and adaptability needed to thrive in cross-cultural settings.

Conclusion and Recommendations

The cross-cultural adaptation of Chinese teachers in Sri Lanka is a complex and multifaceted process involving a range of linguistic, cultural, and professional challenges. Teachers in this study demonstrated resilience and adaptability, employing strategies such as language learning, cultural immersion, and support network building to navigate these obstacles and integrate into their new work and social environments. The findings of this study have important implications for policymakers, educators, and administrators in both Sri Lanka and China, as well as for the broader field of cross-cultural adaptation research. This study highlights the value of culturally responsive training and local mentorship to enhance the integration and effectiveness of foreign educators, contributing to a deeper understanding of cross-cultural teaching dynamics in diverse contexts.

References

Ada, E. N., Ahmad, H., Uzun, N. B., Jowett, S., & Kazak, Z. (2021). Cross-

cultural adaptation of the Turkish and Kuwaiti teacher–student relationship questionnaire in physical education (TSRQ-PE Teacher Version): Testing for measurement invariance. *Sustainability*, 13(3), 1387. <https://doi.org/10.3390/su13031387>

Chen, M., Zee, M., Koomen, H. M., & Roorda, D. L. (2019). Understanding cross-cultural differences in affective teacher-student relationships: A comparison between Dutch and Chinese primary school teachers and students. *Journal of School Psychology*, 76, 89-106. <https://doi.org/10.1016/j.jsp.2019.07.005>

Dassanayake, N. S. Y. (2024). Intercultural competence in the context of teaching Chinese in Sri Lanka: Ideology vs spirituality. *Journal of Social Sciences and Humanities Review*, 9(1).

Deng, J., & Habil, H. (2021). Cross-cultural academic adaptation difficulties and coping strategies of foreign students in China: A case study of foreign students in Yulin University. In *Virtual language and communication postgraduate international seminar 2021* (p. 35).

Ji'nan, J. (2014). Intercultural adaptation of Chinese guest teachers in the US. *Cross-Cultural Communication*, 10(1), 27-36. <https://doi.org/10.3968/606>

Kandambi, S. U. (2020). A study on teaching Chinese culture in higher education institutes in Sri Lanka. *European Journal of Foreign Language Teaching*, 5(2), 58-69.

Ng, T. K., Tsang, K. K., & Lian, Y. (2013). Acculturation strategies, social support, and cross-cultural adaptation: A mediation analysis. *Asia Pacific Education Review*, 14, 593-601. <https://doi.org/10.1007/s12564-013-9274-0>

Yan, C. (2008). Mutual adaptation: Enhancing longer-term sustainability of cross-cultural in-service teacher training initiatives in China. *System*, 36(4), 586-606. <https://doi.org/10.1016/j.system.2008.03.007>

Yi, S., Wu, N., Xiang, X., & Liu, L. (2020). Challenges, coping and resources: A thematic analysis of foreign teachers' experience of cultural adaptation in China. *Frontiers in Psychology*, 11, 168. <https://doi.org/10.3389/fpsyg.2020.00168>

PRONOUNCING GERMAN: CHALLENGES FACED BY SINHALESE LEARNERS OF GERMAN AS A FOREIGN LANGUAGE (CEFR LEVEL A2)

M.R.T. Marasingha¹, N.S.D Paranavitana^{2*}

^{1, 2} *Department of Languages, Sabaragamuwa University of Sri Lanka*

Abstract

Pronunciation of a language directly impacts the quality of the speech and the personality of the learner. Research on teaching, learning, and evaluating the pronunciation of German at CEFR level A2 in Sri Lanka has revealed numerous errors. The mixed-method approach in this study combines qualitative and quantitative methods to collect data from A2 learners in schools and teachers in the region through questionnaires, pronunciation tests, and observations. The findings indicate that learners' understanding of vowel and consonant sounds in German does not proceed accurately when pronouncing. An empirical research study suggests that there should be a change in teaching and learning methods for pronunciation, emphasising more focused practice for learners and teachers who make errors in teaching and learning pronunciation. The targeted phonetic training and increased awareness of phonological differences between English and German are crucial for improving pronunciation and it is recommended that the German language curriculum for Sinhalese learners include more concentrated phonetic exercises and testing along with comparative linguistic methods applied effectively for the enhancement of accuracy.

Keywords: *Learning German as a Foreign Language, Sinhalese Learners, Pronunciation, Teaching Learning and Evaluating, CEFR A2*

**Corresponding author: Email: nirosha@ssl.sab.ac.lk*

Introduction

Accurate and clear pronunciation enhances overall language fluency and understanding while promoting effective communication. However, learning the subtle phonetics of German can be particularly challenging for students transitioning from Sinhalese to the language. Mastering German phonetics at the A2 level of the Common European Framework of Reference (CEFR) poses unique challenges for Sinhalese speakers learning German as a foreign language. The difference between the phonological systems of Sinhalese and German is a challenge. Sinhalese has a simple link between spelling and pronunciation, and a straightforward phonological structure (Wijesekera, 1966) but German pronunciation is governed by a complex system of vowels, consonants, and phonetic rules (Gussenhoven, C., & Jacobs, H., 2005). This disparity often makes it difficult for Sinhalese learners to reproduce German sounds accurately, especially vowel and consonant combinations that are not present or are different in Sinhalese. As some sounds in the German language do not exist in Sinhala (Kaye, 1997) and as these sounds are not a part of their native language's phonetic inventory, learners tend to distinguish and produce them and by relying on the knowledge of other foreign languages they have already acquired.

Furthermore, German prosody and intonation patterns are very different from Sinhala. According to Roach (Roach, 2009), German is a stress-timed language wherein the focus on syllables and word stress is essential for expressing meaning and clarity. On the other hand, according to Ranasinghe and Thambiah (Ranasinghe, P., & Thambiah, M., 1979), Sinhalese is a syllable-timed language with distinct rhythmic patterns and stress placement. It might be difficult for Sinhala learners to adjust to German intonation patterns making it difficult for them to communicate in speaking discourse successfully. The teaching approaches and instructional materials are crucial in resolving pronunciation difficulties. Good teaching strategies should incorporate specific exercises that concentrate on difficult phonemes and give students a lot of chances to practice pronouncing words correctly in context. With assistance and feedback, explicit teaching on the phonetic distinctions between Sinhalese and German is provided. While Sinhalese learners at the CEFR level A2 face considerable difficulties in learning German pronunciation, they can be better understood and overcome using efficient teaching and learning practices. Teachers can adjust their teaching strategies to help students become more proficient in German pronunciation by taking into account the linguistic differences and phonetic nuances between Sinhalese and German.

Material and Methods

The study entails conducting desktop research to establish the theoretical foundation and underpin the empirical findings in established literature. The employed mixed methods approach combining qualitative and quantitative techniques has ensured a comprehensive understanding of the pronunciation of both the teachers (25) and the learners (100). The data on participants' language skills, experiences, knowledge of word pronunciation, and teaching methods were gathered through questionnaires. In addition, oral pronunciation tests were administered, and the results were evaluated for pronunciation variables by analysing recorded sessions. The study also examines the use of language through questionnaires and interviews, focusing specifically on teachers who have and have not received teacher training on German as a Foreign Language. Furthermore, classroom observations are conducted to examine their usage of pronunciation.

Results and Discussion

The thesis findings reveal that learners and educators face significant challenges with German pronunciation, particularly concerning sounds such as /pf/, /ps/, /kn/, /tz/, and /ch/. These difficulties primarily stem from interference with English (L2); learners tend to rely on English phonetics due to the absence of these double consonants in Sinhalese (L1), resulting in frequent mispronunciations in German. While learners strongly understand German vowels, consonants, umlauts, and diphthongs, this theoretical knowledge does not consistently translate into accurate spoken language. Additionally, the research indicates that instructors' limited training in phonetics compounds these pronunciation challenges. Many teachers are not well-versed in the International Phonetic Alphabet (IPA) and often fail to employ effective pronunciation materials. As a result, they inadvertently pass on incorrect pronunciations to their students. This underscores the pressing need for enhanced teacher training in pronunciation pedagogy to promote accurate German phonetics.

Conclusion and Recommendations

While teachers and learners demonstrate somewhat phonetic knowledge, this understanding often does not extend to spoken fluency, suggesting that targeted instructional strategies are essential for improving pronunciation accuracy. Effective language programmes should thus address specific sounds that learners struggle with, using consistent practice and feedback to bridge the gap between phonetic knowledge and speaking skills. To address these needs, several recommendations emerge. Targeted Phonetic Training should

be integrated into language programmes, emphasising difficult German sounds through contrastive analysis with English and Sinhalese phonetics. Continuous practice and real-life application should be central to classroom activities, with learners actively participating in speaking and listening exercises. Teacher Training and Professional Development are also critical; educators should receive specialised instruction in pronunciation teaching, including IPA familiarity and practical phonetic tools. Incorporating technology and resources such as language apps and online dictionaries will allow for independent practice and accessible feedback. Additionally, institutions should revise curricula to include regular pronunciation assessments and emphasise speaking and listening skills equally with reading and writing. Finally, a Practical Pronunciation Model that simulates real-life interactions can help learners build both phonetic accuracy and confidence in spoken German.

References

- Derwing, T. M., & Munro, M. J. (2015). *Pronunciation fundamentals: Evidence-based perspectives for L2 teaching and research*. TESOL Quarterly, 49(4), 762-786. <https://doi.org/10.1002/tesq.230>
- Gussenhoven, C., & Jacobs, H. (2005). *Understanding phonology* (2nd ed.). Oxford University Press.
- Dieling, H., & Herscheld, U. (2000). *Phonetik lehren und lernen*.
- Ranasinghe, P., & Thambiah, M. (1979). A phonological study of Sinhalese. *Journal of the International Phonetic Association*, 9(1-2), 29-36. <https://doi.org/10.1017/S002510030000578X>
- Roach, P. (2009). *English phonetics and phonology: A practical course* (4th ed.). Cambridge University Press.
- Wijesekera, P. (1966). *The Sinhalese language*. Ceylon University Press.

OVERCOMING LINGUISTIC BARRIERS: ANALYSING MORPHOLOGICAL ERRORS IN GERMAN WRITING AMONG SINHALESE LEARNERS OF GERMAN AS A FOREIGN LANGUAGE

D.M.H.C. Dissanayake^{1*}, N.S.D Paranavitana²

^{1, 2} *Department of Languages, Sabaragamuwa University of Sri Lanka*

Abstract

The popularity of learning German is increasing in Sri Lanka. However, Sinhalese learners of German as a foreign language face various challenges in acquisition due to linguistic, geographical, and cultural differences between the two languages. Among mastering four language skills, writing has gained a significant concentration in Sri Lanka. Hence, due to the structural differences between the languages, it is evident that Sinhalese learners frequently make errors in their writing in German. Among frequent errors, morphological errors are common. This investigation into the error analysis of common morphological errors made by Sinhalese learners of German as a foreign language aims to enhance the effectiveness of writing and teaching strategies. Quantitative and qualitative methods are applied to obtain the results as to how Sinhalese learners of German are influenced by their native language, second language interference, and misunderstanding of German grammatical rules. As a result, this study recommends a bilingual approach to teaching and the incorporation of regular, targeted exercises.

Keywords: *Sinhala Learners, Writing Skills in German, Error Analysis, Morphology*

**Corresponding author: D.M.H.C. Dissanayake Tel.: +94 (71) 729 8167; Email: hansini@ssl.sab.ac.lk*

Introduction

German and Sinhalese, although they are members of the Indo-European language family, possess distinct linguistic features that create challenges for Sinhalese learners of German. Cultural differences and geographical distance from Germany have affected the language acquisition and application process for Sinhalese learners studying German as a foreign language. In such an environment, making errors has become a common factor in the German language classroom in Sri Lanka.

Making errors is a natural phase of learning and it represents one step in language acquisition. Errors provide teachers with information about potential shortcomings in lesson planning, presentations, the choice of exercises, the quality of textbooks, and the use of subject matter. They reveal the extent to which learners have mastered learning, confirmed the appropriateness of the chosen teaching methods and materials, and indicated the level that students have reached. Thus, errors serve an informational function in the process of skill mastery. Among the four skills (reading, writing, reading, and listening) that are practiced and achieve required proficiency levels, writing has been given a significant emphasis in German language classrooms in Sri Lanka, as government examinations primarily focus on testing writing skills. Hence, developing writing skills in learning German as a foreign language plays a vital role in the teaching and learning process. Therefore, this study concentrates on specific writing errors made by Sinhalese learners of German, attempting to answer the following research problem: What are the most common morphological errors made by Sinhalese learners in German writing, and what factors contribute to these errors?

Richards et al. (2002) state that “an error is the use of a word, speech act, or grammatical item in a way that appears incomplete and is necessary for incomplete learning”. Linguists have attempted to categorise errors in various aspects. Language errors are primarily classified into three types such as grammatical errors, lexical errors, and orthographic errors. Grammatical errors can further be divided into morphological and syntactic errors. Based on categorisation by Richards et al. (2002) “language errors can be classified into two types such as interlingual and intralingual. Interlingual errors refer to errors that arise from the influence of the learner’s native language on the target language and intralingual errors occur within the target language itself.” In the Sri Lankan context, Sinhalese learners of German show a strong tendency to be influenced by linguistic structures and patterns of both their native and second languages. Richards et al. (2002) explain that learners are

influenced not only by their first language but also by their second language.

Although numerous studies focus on language errors made by foreign language learners, limited research has been conducted on the specific morphological errors made by Sinhalese learners of German and the factors contributing to these errors. Existing studies explore general linguistic errors but lack in-depth research on the morphological errors made by Sinhalese learners of German. This study aims to bridge the gap by analysing the morphological errors made by Sinhalese learners of German in writing and identifying the factors contributing to these errors. The objectives are to identify specific difficulties faced by Sinhalese learners, enabling students to enhance teaching strategies and improve writing proficiency.

This study employs Error Analysis Theory as a theoretical framework to examine the morphological errors made by Sinhalese learners of German. Corder (1967) introduced Error Analysis Theory, which includes a systematic approach to analysing language errors and allows researchers to understand learners' cognitive processes, native language interference, and other factors affecting language acquisition. The study will analyse morphological errors in writing by applying this framework to examine contributing factors. Thereby, this paper offers insights for teachers to enhance teaching strategies and improve student outcomes in German language acquisition.

Material and Methods

This study used quantitative and qualitative methods for data analysis. In foreign language learning, writing can be viewed as a generative and challenging process. By using this mixed method of approach, the study not only identifies errors in writing but also interprets these error patterns within the student learning process. This approach allows for a deeper understanding of how native language influences and external contributing factors lead to errors in writing. The target population consisted of students above CEFR level A2, as the productive process starts from this level. The purposive sampling was used to select 100 students: 70 students from Sri Lankan schools and 30 students from universities in Sri Lanka. All students were at CEFR level A2 and were studying German as a foreign language. Primary data were collected through students' written assignments. These assignments were part of the students' coursework and aimed to generate a variety of written responses, allowing a comprehensive analysis of the morphological errors made and providing insight into the types of errors that arise in an authentic learning environment. Additionally, observation in the classroom and unstructured interviews were conducted with both teachers and students.

Secondary data, including previous studies and linguistic error analyses relevant to learners of German, were reviewed to place the findings within the broader research on language acquisition. Through quantitative analysis, the types and frequencies of morphological errors were counted and categorised and the quantitative analysis provided a detailed examination of error patterns to explore the underlying causes of these errors.

Results and Discussion

The analysis of morphological errors made by Sinhalese learners of German reveals difficulties with plural formation, the application of articles, and verb conjugations. These morphological errors arise from a mix of cross-linguistic influence, second-language interference, and the inherent complexities of German language structure. Among the many differences that Sinhalese learners must cope with, the multifaceted nature of plural formation in German becomes a challenging issue. In forming plurals, Sinhalese mainly uses the three suffixes ‘-val’, ‘-varu’ and ‘-la’. Additionally, Sinhalese follows several patterns of phonological change to create plural nouns, rather than adding plural suffixes. In contrast, German employs nine methods of forming plurals, including vowel changes (umlaut), and the addition of various suffixes (such as, _e/ “er/, _er/, _n/ ,_en / _s), or no change to the noun at all. Hence, Sinhalese uses predictable suffixes and phonemic changes, while German uses strategies that include vowel changes. This difference in plural formation can lead to errors, such as adding an “s” to all nouns, indicating a cross-linguistic influence from Sinhalese that overlooks the more complex strategies employed in German. This observation aligns with the Error Analysis theory, which suggests that “learners’ errors frequently stem from the influence of their native language” (Corder, 1967).

Table 1:

Examples of Plural Errors Made by Sinhalese Students of German

	Error	Correct form	Reasons
Formation of Plural	das Kind- die Kinds	das Kind- die Kinder	Cross-linguistic influence and second language influence
	der Apfel-die Apfels	der Apfel-die Äpfel	

German, which is a main obstacle in the process of learning German as a foreign language. In contrast to English, Sinhala follows a natural classification of Gender. As the article of the noun becomes the decision maker of the meaning of a sentence in German the activity of reproducing a text becomes more difficult. Sinhala uses suffixes as case endings, whereas

German uses articles to indicate case endings. Consequently, omission and incorrect use of articles is visible to a greater extent. These structural differences can lead to confusion and errors in article usage.

Table 2:

Examples of Article Errors Made by Sinhalese Students of German

	Error		Correct form	Reasons
Article	der (Nominative)	Katze	die Katze (Nominative)	First-language interference and hard-to-memorize articles
	eine (Accusative)	Hund	einen Hund (Accusative)	

Beyond nouns, errors in verb conjugations also stand out due to the complexity of irregular verb forms in German. In Sinhala, verb conjugations are formed by adding suffixes or an additional word, instead of multiple changes within and outside the verb stem. These errors illustrate learners' struggle with the rules of verb conjugation in German, where the need to memorise, irregular forms poses a considerable challenge.

Table 2:

Examples of Article Errors Made by Sinhalese Students of German

	Error	Correct form	Reasons
Verb conjugations	Er weiß (Irregular verbs- present tense)	Er weiß (Irregular verbs- present tense)	Cross-linguistic influence
	du sprecht	du sprichst	
	Ich habe bekommt (Past participle)	Ich habe bekommen (Past participle)	Hard to memorise rules and cross-linguistic influence
	ich habe geschwommen (Past participle)	ich habe geschwommen (Past participle)	
	ich habe geverstanden (Past participle)	ich habe verstanden (Past participle)	

Overall, the results from the quantitative analysis of given language assignments show that the learners frequently make morphological errors in applying the German article and verb conjugation and plural formation. Additionally, errors in adjective declination, compound nouns, and case endings were also observed. Meanwhile, it is noticeable that all these errors are based on difficulties in article usage. According to the frequency of the analysis of results, 85% of the morphological errors were related to article

usage and verb conjugation, 10% to plural formation, and other errors counted as 6%.

The qualitative analysis reveals that Sinhalese learners of German are heavily influenced by linguistic structures, second language influence, and native language interference. Through observation and unstructured interviews, it was found that incomplete explanations, less practice, and problems in teaching methods affect these morphological errors as external factors. Especially, less practice, the complexity of German structures, and incomplete explanations contribute to errors in article usage and adjective declensions. Additionally, second language influence contributes to errors in plural formation. By employing the Error Analysis Theory, we gain a deeper understanding of the cognitive process behind these errors.

Conclusion and Recommendations

Usage, and verb conjugations, often lead to morphological errors. Various strategies have been recommended to overcome these challenges. The analysis reveals that these challenges are largely rooted in structural differences between German and Sinhalese, as well as the influence of both native and second languages. Errors in article usage were found to be the most prevalent and this high frequency points to the need for instructional emphasis on articles, verb conjugation, and plural formation patterns in the German language classroom. External factors, incomplete explanations in teaching, less practice, and problems with teaching methods affect these morphological errors. A bilingual approach to teaching could be one solution to understanding variations. Teachers should reveal and emphasise structural differences between the two languages for the learners to create their strategies of acquisition. Then it helps students to acquire and apply German rules correctly. Finally, the inclusion of regular exercises using the reproductive method is necessary for internalising proper forms. Implementing these strategies will facilitate the progress of the Sinhalese learner and reduce errors in writing German.

References

Richards, J. C., & Rodgers, T. S. (2002). *Approaches and methods in language teaching* (2nd ed.). Cambridge University Press.

Corder, S. P. (1967). The significance of learners' errors. *International Review of Applied Linguistics in Language Teaching*, 5(4), 161-170. <https://doi.org/10.1515/iral.1967.5.4.161>

Ondráková, J., & Siručková, J. (2014). An analysis of mistakes in writing assignments of German. *University of Hradec Králové, Rokitanského 62*, 50003 Hradec Králové, Czech Republic.

Walz, J. C. (1982). Error correction techniques for the foreign language classroom. *Language in Education: Theory and Practice*, No. 50. Center for Applied Linguistics, U.S.A.

Vyatkina, N. (2010). The effectiveness of written corrective feedback in teaching beginning German. *Foreign Language Annals*, 43(4), 671-689. <https://doi.org/10.1111/j.1944-9720.2010.01103.x>

TRANSLATING HUMOUR BASED ON CULTURAL REFERENCES: ASTERIX IN BRITAIN IN SINHALA

H.S.M.M. Jayawardena^{1*}

¹ *University of Kelaniya*

Abstract

Translating humour is a challenging task. The present study examines the translation of verbally expressed humour in a dubbed animated film. The study is based on Asterix in Britain (1986) and its Sinhala dubbed version *Sūra Pappā saha Engalanta Savāriya*. To identify and to categorise humorous elements, the taxonomy of Minutella (2014) was applied. Humour based on cultural references and allusions was first chosen from the source text and then, the dubbed version was examined to understand the strategies employed by the translators. The strategies proposed by Chiaro (2006) were referred to when analysing the results. The study reveals that the substitutions from the target language favouring a domestication approach, are used to recreate humour. However, a certain number of cultural references are completely eliminated, weakening the comic effect in the target language. The study stresses the importance of employing creative translation strategies to reproduce humour and to compensate for the humour loss in the dubbed film to offer humorous moments to the target audience.

Keywords: *Animation Films, Challenges, Domestication, Humour, Substitutions*

*Corresponding author: Email: samanthij@kln.ac.lk; <https://orcid.org/0000-0002-1971-4850>

Introduction

Animated films are known for their humour. Translating humour into other languages is a complex task that requires creative solutions. Dubbed or subtitled, the target audience relies on the skills of the translators to enjoy the humour.

The present study highlights the challenging nature of translating Verbally Expressed Humour (VEH) in dubbed animated films. Verbal humour is not only limited to forms of wordplay but also be generated by cultural references. However, if the target audience does not share the knowledge of certain cultural aspects, they could find it difficult to understand and appreciate the humour associated with them. Therefore, the translators must rely on various strategies to transfer humour into the Target Language (TL). The study proposes to identify these strategies and to examine whether they allow the transfer of humour or whether they lead to a loss of humour.

Material and Methods

For the current study, a Sinhala dubbed animated film from the series Asterix is chosen based on two reasons: the popularity of the Sinhala dubbed version of Sūra Pappā, and the humour for which the series is well-known. The study is limited to one film, Asterix in Britain (1986) and its Sinhala dubbed version.

Though Asterix is a French series originally created by René Goscinny and Albert Uderzo, the Sinhala dubbed version is made from the English version making it the Relay Language (RL). Therefore, in the study, the RL version is considered instead of the Source Language (SL) version. Twelve (12) examples are chosen from the RL for the content analysis. They were analysed qualitatively to understand the translation process.

To identify the humorous elements, the taxonomy proposed by Minutella (2014) is applied: (i) Humour based on cultural references and allusions, (ii) Humour based on wordplay and (iii) Humour based on language variations. From them, humour elements belonging only to the first category are chosen for the study.

The examples are first identified in the RL version and then the TL version is closely examined to understand how the humour is rendered into the TL.

To facilitate the analysis, the study refers to the strategies proposed by Delia Chiaro (2006):

- The substitution of VEH in the Source Language with an example of VEH in the TL.

- The replacement of the SL VEH with an idiomatic expression in the TL.
- The replacement of the SL VEH with an example of compensatory VEH elsewhere in the TL text.

Results and Discussion

The chosen examples are based on the cultural references associated with the British, the Gauls and the Romans. The clash of cultures seen among them is exploited to create humorous moments. British food habits such as drinking hot water with or without milk, eating boiled boar with mint sauce and drinking warm beer are noted in the chosen examples. They are loathed and criticised by the Romans and the Gauls. The confusion created by the British road traffic and units of measurement, unfamiliar to the Gauls, is another aspect that offers humorous instances. For example, Gauls are confused by seeing the British driving on the left-hand side of the road, using the imperial units of measurement such as feet and the Roman numerals to write the house numbers.

For the translators, it is a challenge to recreate the humorous moments that can be appreciated by the target audience. It must be noted that Sri Lanka is a former British colony that adopted British ways. Therefore, these aspects are not a novelty or a source of confusion for the TL audience. To recreate the comic confusion in the TL, the translators must resort to creative solutions.

Considering the strategies employed by the translators, the substitution of VEH in the RL language with an example of VEH from the TL is detected. This strategy orients towards a domestication approach, providing the target audience with aspects that are more familiar to them. For example, a recipe explained by a Roman soldier to make spinach soup is replaced by a description of a beetle quid. Further, the mint sauce which is eaten with boiled boar is substituted by garlic.

Certain habits, such as drinking hot water, are preserved by the translators with modifications like adding sugar to make it more familiar to the TL. Additionally, the translators are able to produce skillful strategies to recreate comic confusion based on driving on the left-hand side and using the Roman numerals. The first is replaced by confusion between the side of the road reserved for vehicles and pedestrians. The second is replaced by the habit of the Gauls who are used to writing the name instead of the house number.

However, in five out of twelve examples, neither a substitution nor a strategy to transfer humour is employed. For instance, making fun of warm beer, and using the measuring unit feet, are completely eliminated causing a humour loss.

Conclusion and Recommendations

The study highlights that by eliminating cultural references which are exploited in the RL to create a comic effect, the humour generated in the TL is weakened. In these instances, the TL audience is unable to appreciate the VEH, only the on-screen action. Therefore, creative translation strategies are essential to maintain humour and at the same time, it is also important to compensate for lost humour to keep entertaining the target audience.

References

- Chiaro, D. (2006). Verbally expressed humour on screen: Reflections on translation and reception. In J. Díaz-Cintas, P. Orero, & A. Ramael (Eds.), *JoSTrans*, 6(1), 198–208.
- Lamsweerde, P. Van. (Director). (1986). *Astérix chez les Bretons* [Film]. Gaumont and Dargaud Productions.
- <https://www.youtube.com/watch?v=asBo3JUWwDU> (English dubbed film)
- https://www.youtube.com/watch?v=eaZMtx_jYd0 (Sinhala dubbed film)
- Minutella, V. (2014). Translating verbally expressed humour in dubbing and subtitling: The Italian versions of *Shrek*. In G. L. De Rosa, F. Bianchi, A. De Laurentiis, & E. Perego (Eds.), *Translating humour in audiovisual texts* (pp. 67-88). Peter Lang.

REVISITING VENUTI'S FOREIGNISATION IN TRANSLATING MAGICAL REALISTIC NOVELS: A STUDY WITH SPECIAL REFERENCE TO ONE HUNDRED YEARS OF SOLITUDE AND ITS SINHALESE TRANSLATION SIYAK VASAKA HUDAKALĀVA

G. T. R. Nimesha^{1*}, J. A. M. Hansani ²

^{1, 2} *Department of Languages, Sabaragamuwa University of Sri Lanka*

Abstract

In regard to a language pair representing distinct linguistic and cultural hegemonies, translators confront the challenge of presenting magical realism, which combines realistic narrative with fantasy. Consequently, Venuti introduced the foreignisation strategy to preserve the differences and conventions of the source culture. Hence, the present study intends to examine how the foreignisation strategy has been employed to translate magical realistic novels. The primary data for the study were collected from the novel, “One Hundred Years of Solitude” by Gabriel Garcia Marquez (1967) and its Sinhalese translation, *Siyak Vasaka Hudakalāva* by Abe Dissanayake and Pasan Kodikara (2003). The document analysis method has been used to select excerpts from the corpus. The collected data were analysed with the use of the content analysis method in this qualitative study. Considering the frequency, the extratextual gloss strategy is the most often used strategy, occurring in eight instances. The study suggests that the translator considers the contextual meaning of expressions while considering the intentions of the author and the perspective of the reader when translating terms and phrases related to magical realism which ensures that the stylistic nuances and cultural richness of the original work are preserved in the translation.

Keywords: *Foreignisation, Literary Translation, Magical Realism, Venuti*

*Corresponding author: Tel.: +94 (76) 808 9985; Email: nimesha.gtr@gmail.com;
<https://orcid.org/0009-0001-0647-6953>

Introduction

Translators encounter many linguistic and cultural challenges in translating literary texts, due to the linguistic and cultural diversities of the languages. Consequently, Venuti (1995) advocated the foreignisation strategy to preserve the differences and conventions of the source culture and to resist the dominance of the target language, without altering terms with the recipient culture.

No prior research has been conducted on the application of foreignisation strategy in translating terms and phrases related to magical realism with reference to *One Hundred Years of Solitude* and its Sinhala translation, considering the miscellaneous nature of cultural and linguistic backgrounds of the Sinhala and English language pair. Therefore, this study intends to examine how the foreignisation strategy has been employed in translating magical realism with reference to the novel, “*One Hundred Years of Solitude*” and its Sinhala translation, in conjunction with the strategies proposed by Aixelá (1996) which includes repetition, orthographic adaptation, linguistic (non-cultural) translation, extratextual gloss, and intratextual gloss under the strategy of “conservation”.

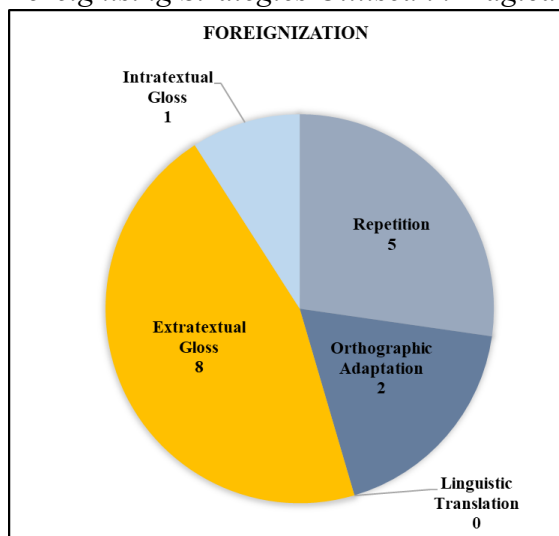
Material and Methods

The primary data have been obtained from the novel, *One Hundred Years of Solitude* by Gabriel Garcia Marquez (1967) and its Sinhala translation, *Siyak Vasaka Hudakalāva* by Abe Dissanayake and Pasan Kodikara (2003) through the document analysis method. The reason for selecting the particular novel is its frequent use of terms related to magical realism. The data have been analysed through the content analysis method in a qualitative approach to study the use of sub-strategies of foreignisation strategy.

Results and Discussion

The Interpretation of Results

The following pie chart presents the frequency of the utilisation of the foreignisation strategy and its sub-strategies in the rendition of magical realism.

Figure 1:*Foreignising Strategies Utilised in Magical Realism*

As per the observation, most of the selected excerpts related to magical realism have been foreignised through the extratextual gloss strategy. Contrarily, linguistic translation has not been employed in the translation. However, the translator has rendered some texts through the repetition strategy without inserting any over-interpretation. When considering the orthographic adaptation strategy, it has been slightly used in the process of translating. Only one text has been rendered through the intratextual gloss.

Discussion

Repetition

Table 1:

SL Term/Phrase	TT
“Macondo” (P. 1)	“මැකොන්ඩාව” (P. 1)
	mækonḍāva

The repetition strategy is used to translate proper nouns that are endemic to the source culture and sound foreign to the target culture. “Macondo” is a fictional village disguised as an island, imagined by the author of the original work, which symbolises the behavioural patterns and the perspectives of mankind’s impact on the world. Consequently, the translator has repeated the same item, to preserve the motive of the imagination of the author of this classic.

1. Orthographic Adaptation

Table 2:

SL Term/Phrase	TT
“...the multi-use <u>machine</u> that could be used at the same time to sew buttons and reduce fevers...” (P. 17)	“...එකවිට බොත්තම් කාස මැසීමටත් උණ බැස්සීමටත් හැකි බහුවිධ ප්‍රයෝජන ඇති <u>මැෂිමක්</u> ...” (P.19) “Ekaviṭa bottam kāsa mæsīmaṭat uṇa bæssīmaṭat hæki bahuvidha prayōjana æti mæṣimak...”

Transcribing, transliterating, and borrowing can be considered the ways of orthographic adapting to keep the translation parallel to the foreign values of the source. Here, the underlined phrase has been borrowed into the target language, in order to preserve the strangeness. In some cases, borrowed terms ease the reading process than the direct equivalents or cultural adaptations.

2. Extratextual Gloss

Table 3:

SL Term/Phrase	TT
“He wore...a velvet across which the <u>patina</u> of the centuries had skated...” (P. 7)	“ශත වර්ෂවල <u>පැටිනා</u> තට්ටු ගෙන්නම් වූ වෙල්වට් බැනියමක් ඇන්දේය.” (P. 7) “Śata varṣavala pæṭinā taṭṭu gettam vū velvaṭ bæniyamak ændēya.”

Footnote: Lōkaḍavala bæñdena koḷa pæhæ taṭṭu

The translator has provided an over-interpretation to help the reader to have an idea about the expression and the storyline. Accordingly, the translator has been able to cope with the challenge of translating a term that affects the level of fantasy contained within this phrase without distorting the cultural identity of the original classic.

3. Intratextual Gloss

Table 4:

SL Term/Phrase	TT
“...a hen who laid a hundred golden eggs to the sound of a <u>tambourine</u> , and a trained monkey who read minds...” (P. 17)	<p>“කුඩා මිණි ගෙඩි සහිත රබානක නාදයට අනුව රත්තරන් බිත්තර දැමූ කිකිළියක්, සිත් කියවීමට හැකි පුහුණු වූ වළරෙක්...” (P. 19)</p> <p>“kuḍā miṇi geḍi sahita rabānaka nādayaṭa anuva rattaran bittara dæmū kikiḷiyak, sit kiyavīmaṭa hæki puhunu vū vaṇḍurek</p>

This phrase consists of fictional elements, which sound eccentric in reality. Thus, the translator has explained the realistic sign to express the sense of the magical element mentioned within the phrase to highlight the combination of fantasy with realism.

Conclusion and Recommendations

The research suggests that the translator of the selected work has used foreignisation strategies to preserve the source cultural elements and out of Aixelá's (1996) strategies, the translator has most frequently used extratextual gloss. It has helped to convey source culture nuances while maintaining a sense of “foreignness” in the target text. Moreover, it has been realised that it is required to conduct more investigations on the effectiveness of Venuti's strategies to enhance the standard of translations of such classics related to magical realism.

References

- Aixelá, J. F. (1996). Culture-specific items in translation. In R. Álvarez & M. C.-A. Vidal (Eds.), *Translation, power, subversion* (pp. 52–78). Multilingual Matters.
- Bowers, M. A. (2005). *Magic(al) realism*. Routledge.
- Kuleli, M. (2020). Culture-specific items in literary texts and their translation based on “foreignisation” and “domestication” strategies. *RumeliDE Dil ve Edebiyat Araştırmaları Dergisi*, 617-653. <https://doi.org/10.29000/rumelide.811038>

Márquez, G. G. (2000). *One hundred years of solitude* (G. Rabassa, Trans.). Penguin Classics. (Original work published 1967)

Márquez, G. G. (2003). *Siyak vasaka hudakalāva* (A. Dissanayake & P. Kodikara, Trans.). (Original work published 1967)

Venuti, L. (1995). *The translator's invisibility: A history of translation*. Routledge.

REVISITING BAKER'S STRATEGIES IN SUBTITLING DIALECTS, WITH SPECIAL REFERENCE TO MĀNIKKĀVATA TELEDrama

K.M.D. Kobbagala^{1*}

¹*Department of Languages, Sabaragamuwa University of Sri Lanka*

Abstract

Subtitling is a significant yet underrated sub-discipline in translation studies in Sri Lanka. This study examines the strategies employed by the translator in subtitling dialects in Sinhala to the English language, with special reference to Sri Lankan teledrama. As per the methodology, the researcher has used Mānikkāvata teledrama as the unit of analysis to identify dialects, and, content analysis is used as the data analysing method with the categorisation of strategies under the eight strategies proposed by Mona Baker (1992). Data analysis demonstrated that all eight strategies have been employed by the translator and translation by a more neutral word is the most popular strategy that is used. The research encourages further studies to deal with nonequivalence at the word level in terms of subtitling dialects.

Keywords: *Audiovisual Translation, Subtitling, Dialects, Nonequivalence, Strategies*

*Corresponding author: Tel.: +94 (77) 462 8381; Email: dulanjaleekobbagala@gmail.com

Introduction

A language is derived from a collection of mutually intelligible dialects (Chambers, 2000) to facilitate communication. These dialects are divided into regional dialects which form a language unique to the geographical area and social dialects that associate with a particular class, reflecting social variation in the usage of a language. With the advent of new modes in the field of translation, Audio-Visual Translation (AVT) is a specialised form of translation that focuses on the transfer of multimodal and multimedia content across languages and cultures. In this regard, subtitling is one of the important modes of AVT. It refers to the texts that appear on the screen either in the same language of the audiovisual work (i.e. intralingual subtitling) or in another language (i.e. interlingual subtitling).

However, being a cross-medium activity, subtitling dialects is not an easy task and only a few researches in this regard have been done. Hence, the center of this research is to find the strategies that have been used to overcome untranslatability when applying subtitling to dialects referred to in the Sinhala language.

Material and Methods

This qualitative research examines the subtitling used in the 2021 teledrama ‘Māṇikkāvata’ adapted from the novel of the same title by Mahinda Prasad Masimbula. The choice of this particular teledrama was determined by its distinctive use of dialectical variations. Using the content analysis, the following part of the article observes the subtitling of dialects with special regard to the mode of AVT. In order to examine the strategies that work in practice, ten episodes taken from the ‘Māṇikkāvata’ teledrama were examined. The secondary data was collected from the previous research papers and lecture notes. In order to analyse the collected data, the eight strategies proposed by Mona Baker to deal with non-equivalence at the word level (1992) were used under qualitative observation.

Results and Discussion

Table 1:

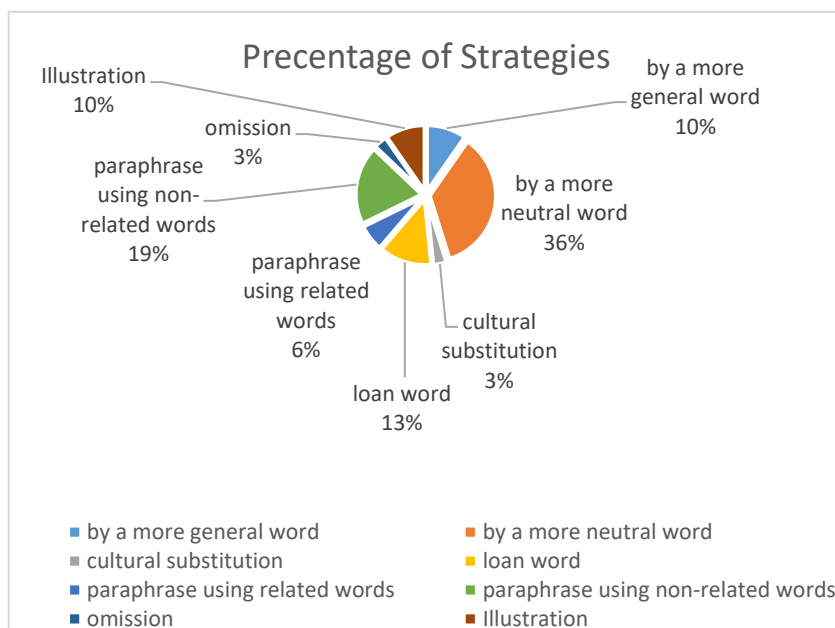
Use of Strategies

No.	SL	TL	Baker's Strategy
1.	කිකිරිඳිය kikirindiya	Edible greens	more general word
2.	කෑහි පිත්තන් කොළ kæhi pittaṇ koḷa	Herbal leaves	more general word
3.	මඩු කොකු ව්‍යංජනය maḍu koku vyaṇjane	Curry	more general word
4.	මලයණ්ඩි malayaṇḍi	Younger brother	more neutral and less expressive word
5.	අයියණ්ඩි ayyiṇḍi	Elder brother	more neutral and less expressive word
6.	බවලන් උදවිය bavalat udaviya	Women	more neutral and less expressive word
7.	ඉලන්දාරියා ilandāriyā	Young man	more neutral and less expressive word
8.	හිච්චා hichchā	Little fellow	more neutral and less expressive word
9.	කිරිකෝඳු kirikōḍu	Maiden climbers	more neutral and less expressive word
10.	දඳුකෝඳු daṇḍukōḍu	Season climbers	more neutral and less expressive word
11.	කරුණා කරනවා karuṇā karanavā	Worship	more neutral and less expressive word
12.	අවකැපෙන කතා avakæpena katā	Don't talk nonsense	more neutral and less expressive word
13.	ගුරුකම්හතේ වැඩ gurukamhatē væḍa	Witchcraft	more neutral and less expressive word
14.	ඉඳුණු හිඹුටු ගෙඩියක් iṇḍuṇu hiḃuṭu geḍiyak	Ripe wild berry fruit	cultural substitution

15.	ඔඩ්ඩි odḍi	The demon Oddi	loan word or loan word plus explanation
16.	බෙරණ නැකත beraṇa nækata	The inauspicious time of Berena	loan word or loan word plus explanation
17.	ගිරි යක්ෂණිය giri yakshaniya	The spirit of Giri	loan word or loan word plus explanation
18.	රොඩි කුප්පායම් roḍi kuppāyam	Rodiya (Untouchable s) tribe	loan word or loan word plus explanation
19.	උඹ බඩින් නේද? uḅa baḍin nēda?	You are expecting, aren't you?	paraphrase using related words
20.	මඩනවාලු maḍataṽālu	Muddy-born paddy	paraphrase using non-related words
21.	ලියද්ද මඩ කොරද්දි liyæddi maḍa koraddi	When the paddy fields were being ploughed and divided	paraphrase using non-related words
22.	හකුරු වැඩ hakuru væḍa	Made a living from producing jaggery	paraphrase using non-related words
23.	මල කපන පිහිය mala kapana pihiya	Tapping knife	paraphrase using related words
24.	තුන් සරණේ tun saraṇē	Blessed stanzas about Triple Gem	paraphrase using non-related words

25.	ඳන කාලා data kāla	How much effort do they put	paraphrase using non-related words
26.	පනාමුරේ ඇත් ශාල panāmurē æt gālē	Came to work in the elephant shed	omission
27.	එස් කවියක් කියන්නේ vas kaviyak kiyanna tiyenne	That man deserves to be cursed	Illustration
28.	පුක්කඩ වැඩ pūkkada væḍa	Mischief	Illustration
29.	වෙසමුණි වැහෙන vesamuṇi væhena	Infuriate	Illustration

Figure 1:
Percentage of Strategies



Results indicate that all eight strategies have been employed and Translation by a more neutral word constituted the main part of 36% while only 3% accounts for omission and cultural substitution.

Translating by a neutral word is mostly used when subtitling the relative names. For example, relative names such as ‘malayaṇḍi’ and ‘aiyiyaṇḍi’ have been translated by shifting to the standard dialect as ‘younger brother’, ‘elder brother’ respectively. Further, religious dialects such as ‘kirikōḍu’ and ‘daṇḍukōḍu’ have been also translated by a less expressive word. Translation by more general word is commonly used to replace names of the herbs, for instance, ‘kækuṇa daḷu’ and ‘dīkiriṇḍiya’ as ‘green bud’ and ‘edible greens’ respectively in the TL.

Translation by a cultural substitution occurs when the concepts in the SL is replaced by a substitution of the TL. This is also known as adaptation. The word ‘hiḷuṭu’ used as a local symbol in the dialogue has been replaced as ‘wild berry fruit’ to give the same feeling as in the original. Translation using a loan word or loan word plus explanation is also commonly seen in several cultural dialects. For instance, ‘oḍḍi’ has been translated as ‘the demon oddi’ borrowing the ‘oddi’ from the SL. Translation by paraphrase using related and unrelated words has been used to translate the agricultural dialects. Instead of borrowing the term ‘maḍatavālu’ directly from the SL, it has been paraphrased as ‘muddy-born paddy’.

As the meaning conveyed by ‘panāmurē æt gālē’ is not vital enough to the development of the text, the translator has employed omission. Illustration is used for the text to be short, and concise, especially when translating dialects of ‘pūkkāḍa vāḍa’, ‘hakkalaṇ karanavā’, ‘vesamuṇi vāhena’.

Conclusion and Recommendations

In this study, the researcher mainly aimed at examining the subtitling dialects and strategies that have been used in these ten episodes of Māṇikkāvata teledrama, using eight strategies proposed by Mona Baker to deal with non-equivalence at the word level (1992). Mostly in selected episodes, the translator has employed the translation by a more neutral word (36%) to make an objective translation for the addresses. Examining the overall frequency of strategy appliance in dialect subtitling, the translator has overcome the nonequivalence to some extent. Nevertheless, the research encourages further studies on more possible strategies that can be employed in subtitling dialects.

References

Anh, T. V. (2018). Strategies for non-equivalence at word level in literary texts: A case study. *12th International Conference on Language, Education and Innovation (ICLEI)*, 11.

- Baker, M. (1992). *In other words: A coursebook on translation*. Routledge.
- Catford, J. (1965). *A linguistic theory of translation*. Oxford University Press.
- Chambers, J. (2000). Region and language variation. *English World-Wide*, 21, 31.
- Crystal, D. (1977). *A dictionary of linguistics and phonetics*. Blackwell Publishing.
- Gamage, J. H. (2010). A study on compensation strategies of subtitling culture-bound items. *13th International Research Conference*, 5.
- Hanieh, N., & Naghdi, R. E. (2020). Bakerian non-equivalence translation strategies in novel vs short story: The case study of *Matilda* vs *Landlady and other short stories*. *Theory and Practice in Language Studies*, 12.
- Nida, E. A. (2015). *Contexts in translation*. City University of Hong Kong Press.

A STUDY ON THE USE OF ADAPTATION TECHNIQUE IN STAGE DRAMA: WITH SPECIAL REFERENCE TO THE SINHALESE TRANSLATION OF 'THE CAUCASIAN CHALK CIRCLE' BY BERTOLT BRECHT

D.M.I.K. Kumari^{1*}

¹*Department of Languages, Sabaragamuwa University of Sri Lanka*

Abstract

This study focuses on the adaptation techniques adopted in the translation into Sinhala with special reference to the stage play 'The Caucasian Chalk Circle' by Bertolt Brecht. Since translators use different techniques to overcome the challenges in translating a cultural and political-themed stage play into Sinhala, the study's main objective is to examine the adaptation techniques adopted by translators while translating the play. This study is based on a qualitative research methodology and the data for the study was collected by observing the translation of the selected play. Content analysis was used for data analysis. Researchers have identified four types of collocation, cultural, literary and ideological, as suggested by Assaqaf and Ali (2016). Of the four adaptation techniques identified, the most commonly used is cultural adaptation with the highest percentage of 41%. It is important to research translation to suit culture, language and audience expectations as drama is a major element of enjoyment. Furthermore, this study aims to provide recommendations for future researchers to conduct new research from different perspectives.

Keywords: *Adaptation Techniques, Cultural Adaptation, Stage Play, Techniques, Translation*

**Corresponding author: Tel.: +94 (77) 368 0014; Email: ishalka1998@gmail.com*

Introduction

Literary translation is a complex relationship between different languages, cultures and artistic expressions. Literary translation involves translating works of literature, such as novels, short stories, poems, plays, and essays. Here the primary goal is to capture not just the meaning of the original text but also its artistic qualities, style, tone, and emotional impact. In this complex translation process, adaptation (Hutcheon, 2006) stands out as an important step in the successful transfer of literary works across linguistic and cultural boundaries. In this study, the researcher has decided to identify and study the adaptation techniques used by Henry Jayasena in translating the famous stage play 'The Caucasian Chalk Circle' written by Bertolt Brecht (1944) into Sinhala as 'Huṇu Vaṭaey Katāva' (1967).

The research aims to study the use of 'adaptation' as a translation technique in the stage drama 'Huṇu Vaṭaey Katāva'.

Considering the above research problem, the main objective of this study is to examine the adaptation techniques used in the translation of the stage play 'The Caucasian Chalk Circle' written by Bertolt Brecht into Sinhala.

Although research on adaptation in translation exists, there has been insufficient focus on how the four adaptation techniques proposed by Assaqaf and Ali (2016) have been applied in stage plays. Additionally, few studies have been conducted in Sri Lanka on the use of translators as an adaptation method in translating stage plays into Sinhala. Among them, Dandeniya (2016) provides a theoretical introduction to the importance of Greek drama translation and drama adaptation in Sri Lanka. However, this study fills the gap in adaptation techniques introduced by Assaqaf and Ali (2016) which were not discussed in that study. It evaluates how effective these adaptations are in preserving the integrity of the source material while ensuring they resonate with local audiences.

This study examines the methods of adaptation used to translate original works to suit Sri Lankan cultural contexts, linguistic characteristics and audience expectations. Furthermore, this study is expected to be useful for translators interested in evaluating translation strategies and beneficial for future researchers to conduct new research from different perspectives.

Material and Methods

The current study is a qualitative research study that uses the content analysis method to examine the four types of adaptation introduced by Assaqaf and Ali

(2016). In this study, the famous stage play ‘The Caucasian Chalk Circle’ written by Bertolt Brecht and the translation of the stage play ‘Huṇu Vaṭaey Katāva’ translated into Sinhala by Henry Jayasena were selected as the contents to be analysed. Secondary data was collected from previous research papers. Therefore, the research problem is solved through observations and evaluation.

Results and Discussion

According to the theories presented by Assaqaf and Ali (2016), 100 applications were analysed using 4 adaptation types: collocation, cultural, literary and ideological.

1. Collocation Adaptation

It refers to the process of adjusting word combinations for translation from one language to another. According to Richards (1992), collocation is the regular use of words together. This involves not only translating words directly but also adapting phrases to match the language and cultural norms of the target language.

The term ‘Brought him up (ibid, p. 217)’ is not directly translated but translated to match the language and cultural norms in Sinhalese as ‘මමයි හැදූවේ (පි.95)’.

- Ordinary child (p.223)- සාමාන්‍ය පැටියෙක් (පි.104)
- Unspeakable (p.221)- නින්දිත යි (පි.102)
- On my feet (p.222)- මං ගියේ පයින් (පි.103)

(The Caucasian Chalk Circle, 1944) (Huṇu Vaṭaey Katāva, 1967)

2. Cultural Adaptation

It involves modifying the content of a text to make it culturally relevant and understandable to the target audience. This process goes beyond linguistic translation and includes adjusting references, idioms, symbols, customs, and other cultural elements to ensure the translated text resonates with the cultural context of the target audience.

The term ‘Piece of cheese (p.195)’ is translated as ‘පාන් කැල්ලක් (පි.74)’ as it has been adjusted according to resonates with the cultural context of the target audience. The symbols and idioms suitable for the target culture have been used as follows.

- A goose? (p.148)- කුකුළෙක්? (පි.16)

- Sunflower seeds (p.210) - වැලි තලප (පි.86)
- Once the wind starts blowing, it blows through every crack and cranny (p.162)-යන යකා යනවලු හැළි වළන් බිඳ ගෙන (පි.70)
- Our heads in the clouds, our behinds in the water! (p.194) -පස්ස බිම ඇණුනත් ගමන උඩින්! (පි.36)

(The Caucasian Chalk Circle, 1944) (Huṇu Vaṭaey Katāva, 1967)

3. Literary Adaptation

It involves transforming a literary work from one form or language to another while preserving its essence, style, and meaning. This process often requires creative adjustments to ensure that the adapted work resonates with the new audience in a way that is both faithful to the original and culturally appropriate.

As the term 'a fart has no nose! (p.224)' is grammatically and semantically equivalent to the term 'වාතයට නහයක් නැති ලූ! (පි.105)' it can be classified under literal adaptation. Furthermore,

- Governor's bitch's(p.203) - ආණ්ඩුකාර බැල්ලිගෙ (පි.80)
- This hovle (p.149) - මේ ගුබ්බැයමේ (පි.18)
- Indecent language(p.224) - අසභ්‍ය වචන (පි.105)

(The Caucasian Chalk Circle, 1944) (Huṇu Vaṭaey Katāva, 1967)

4. Ideology Adaptation

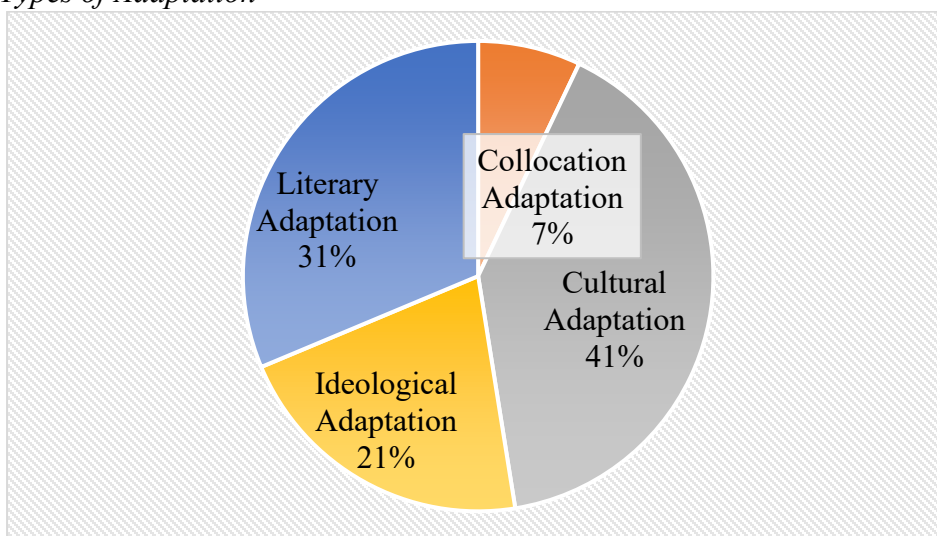
It refers to the process of adjusting the content of a text to align with the political, social, or cultural ideologies of the target audience. This involves more than just translating words; it requires a nuanced understanding of the underlying values and beliefs of both the source and target cultures.

The term 'Thank Heaven (p.192)' is translated as 'දෙවියන්ට පින් සිද්ධ වේවා! (පි.68)' as its underlying meanings are understood in alignment with social or cultural ideologies.

- Creature? (p.218) - එකි ද? (පි.96)
- No good in bed? (p.223) - මේ මිනිහා හොඳ මදි ද? (පි.103)
- Whoring (p.223)- දඩාවතේ ගිහින් (පි.104)
- A ragged little bastard off the streets (p.222)- කාලකණ්ණියෙකුගේ කාලකණ්ණි පැටියෙක් ද (පි.104)

(The Caucasian Chalk Circle, 1944) (Hunu Wataye Kathawa, 1967)

Figure 1:
Types of Adaptation



Results indicate that all four adaptation types have been employed in the stage drama. According to the graph, out of the 4 adaptation strategies used in translation, cultural adaptation holds a major share of 41%. In using cultural adaptation, the translator has focused on adapting references, idioms, symbols, customs, and other cultural elements within the cultural context that are culturally relevant to the target audience. Also 31% percentage is claimed by literary adaptation. The translator has preserved the essence, style and meaning of the source text and has adopted the translation for the new target audience.

Conclusion and Recommendations

The researcher mainly aimed to study the use of ‘adaptation’ as a translation technique in the stage drama ‘Huṇu Vaṭaey Katāva’. The researcher used the 4 adaptation techniques introduced by Assaqaf and Ali (2016) namely collocation, cultural, literary and ideological adaptation. At the end of the study, it was found that the most frequently used adaptation technique is cultural adaptation. This study underscores the need to adapt cultural customs, attitudes and references to resonate with local audiences, making translation more accessible and meaningful in a Sri Lankan society-based context.

Finally, it is suggested that other researchers use adaptation to improve the readability and preserve fidelity of theatrical translation. Also, the present study will effectively highlight unexplored translation techniques in drama translation studies. Further, this study can assist translators in creating faithful versions of the original while adapting to local cultural and linguistic frameworks.

References

Assaqaf, T. A., & Ali, T. (2016). Adaptation as a means of translation. *International Journal of Science and Research*, 50(1).

Bertolt, B. (1944). *The Caucasian Chalk Circle*. Retrieved from Socialist Stories: <http://www.socialiststories.com/en/writers/Brecht-Bertolt/The-Caucasian-Chalk-Circle-Bertolt-Brecht.pdf>

Dandeniya, T. (2016). Translations and theatrical adaptations of Greek plays in Sri Lanka from 1990 to 2005 for the Sinhala readers and (multi-ethnic) audience. *Journal of Aesthetic and Fine Arts*, 34-57. Retrieved from <http://repository.kln.ac.lk/handle/123456789/17109>

Hutcheon, L. (2006). *A theory of adaptation*. Routledge.

Jayasena, H. (1967). *Hunu Wataye Kathawa*. Stamford Lake.

Richards, J., & Platt, J. A. (1992). *Longman dictionary of language teaching & applied linguistics*. Longman Group UK Limited.

INVESTIGATING TRANSLATION ERRORS IN TAMIL TO SINHALA MACHINE TRANSLATION SYSTEMS: A STUDY OF 'GOOGLE TRANSLATE' AND 'SUBASA'

M. M. Fazila^{1*}, N. M. Wijebandara², C. Liyanage³

¹*Department of Languages, Sabaragamuwa University of Sri Lanka*

²*Language Technology Research Laboratory,
University of Colombo School of Computing, Sri Lanka*

Abstract

Machine Translation (MT) systems are essential in the present globalised world, to help language learners, the general public, and professional translators. However, developing an accurate MT system for the Sinhala and Tamil language pair remains a challenge, and no comprehensive studies have been conducted to evaluate existing MT systems. This research addresses this gap by analysing errors in Tamil-to-Sinhala translations using Google Translate and Subasa Translate. A total of 100 sentences from Sri Lankan Tamil newspaper articles were evaluated using the American Translators Association's error classification framework. Additionally, a survey involving five professional translators was conducted. The results showed that Subasa Translate had an 87% error rate, primarily consisting of mistranslations (47%), while Google Translate had an 83% error rate, with terminology errors (20%) being the most common. Despite both Google Translate and Subasa Translate exhibiting high error rates, the analysis revealed that Google Translate had a higher proportion of overall correct translations compared to Subasa Translate. Training with a rich dataset that includes a variety of syntactic structures, idioms, and proverbs in both Sinhala and Tamil, as well as developing a better language model using extensive monolingual corpora, will lead to a highly accurate and error-free MT system for the Sinhala-Tamil language pair.

Keywords: *Google Translate, Machine Translation, Subasa, Translation Errors*

*Corresponding author: Tel.: +94 (78) 686 8952; Email: fazilamm97@gmail.com

Introduction

Translation studies has evolved rapidly with technological advancements, particularly in Machine Translation (MT). MT, being a major catalyst for globalisation, such technological developments are especially significant for Sri Lanka in supporting its trilingual policy by bridging the language gap between Sinhala and Tamil. However, only a limited number of MT systems are available for these languages, and questions persist about their accuracy. Furthermore, no comprehensive studies have evaluated these MT systems by analysing their translation and language errors.

Although some large language models support MT for the Sinhala-Tamil language pair, this study focused only on evaluating notable MT systems. Accordingly, the study examines two MT systems: i. Google (2022) and ii. Subasa (2022). Google Translate (GoogleT) is developed by Google Corporation, while Subasa Translate (SubasaT) is created by School of Computing, the University of Colombo, Sri Lanka. While extensive studies have been conducted on GoogleT, research on SubasaT is limited. Additionally, although comprehensive studies exist for the Sinhala-English and Tamil-English language pairs, there remains a research gap in the Sinhala-Tamil language pair. To address this gap, the present study aims to comparatively analyse translation errors in MT outputs between Tamil and Sinhala, specifically focusing on GoogleT and SubasaT. As a limitation, only translations from Tamil to Sinhala direction were analysed.

Material and Methods

The data of the present study are analysed by using content and thematic analysis methods. The primary data used in the analysis consisted of 100 Tamil sentences randomly selected from Sri Lankan Tamil newspapers and Tamil websites. Dictionaries, books, and research articles were used as secondary data sources. In the analysis of the translations, translation errors were categorized according to the American Translators Association (2022) guidelines, while language errors (including spelling, word segmentation, and subject-verb agreement) were analysed by referring to NIE-Sri Lanka (2021) and Coperaheewa (2021).

Additionally, five sets of questionnaires, each with different sentences, were filled out by five professional translators to evaluate the effectiveness of machine translation on a scale from 1 to 4.

1. The translations are generally correct but contain minor spelling mistakes.

2. The translations are correct but include a few minor errors.
3. The translations convey the general idea but contain numerous mistakes.
4. The translations are completely incorrect.

Results and Discussion

The following examples, selected from 100 Tamil sentences, illustrate the types of errors identified.

Table 4:

Example 1: Original Sentence, MT Outputs, and Identified Errors

Source text	
பொறுமையின்மை , போதிய கவனமின்மை காரணமாக பின்னாளில் நாம் சுமைகளை சுமக்க வேண்டிய சூழல் ஏற்படும் .	
<i>GoogleT</i>	<i>SubasaT</i>
தொடர்ச்சிமற்றவன் ஸ்ரீமான்னவன் அவனாக அழகம் நினை பயனாகினை அப்ப லர் புறவீமம் கிழ்ப்பது அது.	ஒவகிம் , ஸ்ரீமான்னவன் தொவீம் நினை பயனாகினை அப்ப லர் புறவீம் கிழ் யது பரிசுரய நினை .
No Language errors	No Language errors
Translation error:	Translation error:
Terminology	- Mistranslation
Omission	
Post Edited	
தொடர்ச்சிமற்றவன் ஸ்ரீமான்னவன் அவனாக அவன் தொடர்ச்சிமற்றவன் தொவீமன் அப்ப பயனாகினை புறவீமம் கிழ்ப்பது அது.	

mistranslated, failing to capture its contextual meaning.

Comparative Data Analysis

Table 3 summarises the errors identified in the analysis of 100 sentences, comparing outputs from *GoogleT* and *SubasaT*.

As illustrated in Table 3, terminological errors were the major translation error (20%) in *GoogleT* output, while spelling errors were the primary language error (7%). Similarly, in the *SubasaT* output, mistranslation was the primary error (47%), with spelling errors being the main language error (8%). In conclusion, *SubasaT* exhibited a higher error rate (98%) compared to *GoogleT* (92%), as depicted in Figure 1.

Figure 1:

Comparison of Errors

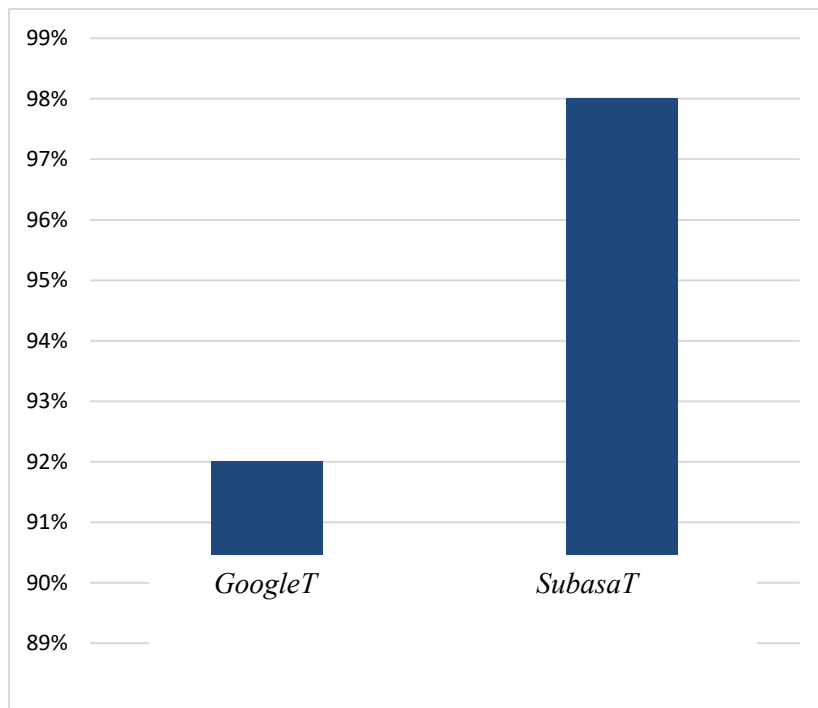
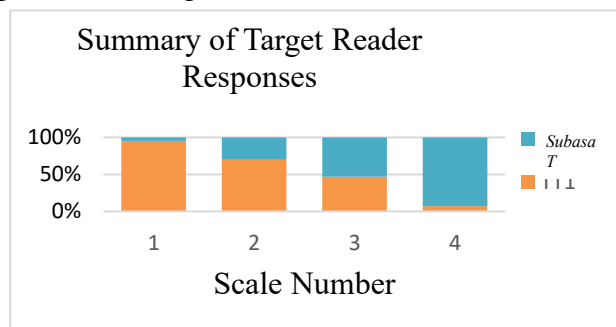


Table 3:*Summary of Errors in the Analysed 100 Sentences*

	Errors	GoogleT		SubasaT	
		Frequency	Percentage	Frequency	Percentage
Language errors	Spelling	9	7%	11	8%
	Word Formation	1	1%	0	0%
	Word Division	1	1%	3	2%
	Subject-Verb Agreement	0	0%	1	1%
Translation errors	Addition	6	5%	1	1%
	Omission	15	12%	5	4%
	Terminology	26	21%	26	19%
	Verb Tense	3	2%	3	2%
	Mistranslation	11	9%	63	47%
	Register	7	6%	1	1%
	Syntax	16	13%	9	7%
	Unfinished	1	1%	1	1%
	Literalness	1	1%	0	0%
	Focus	19	15%	7	5%
	Repeating	1	1%	1	1%
	Correct	10	8%	3	2%
	Total	127	100%	135	100%

Figure 2:*Summary of Target Reader Responses*

As per the scaling criteria provided in the Materials and Methods section, target reader responses were analysed, and the results are illustrated in Figure

2. As shown in Figure 2, GoogleT received the highest number of responses in scale number 1, indicating overall correct translations, while SubasaT received the highest number of responses in scale number 4, indicating overall inaccurate translations.

Conclusion and Recommendations

The research compared machine translation errors from Tamil to Sinhala using GoogleT and SubasaT. The analysis revealed that SubasaT had a higher error rate (87% translation errors, 11% language errors) compared to GoogleT (83% translation errors, 9% language errors). Based on the analysis, the following recommendations are proposed to improve the system:

- Comprehensive training focusing on a variety of syntactic structures in both Sinhala and Tamil is essential with special attention to idioms and proverbs which have created errors in both Google Translate and Subasa
- Providing accurate source texts is crucial to minimising language errors.

References

American Translators Association. (2022). Error categories. <https://www.atanet.org/certification/how-the-exam-is-graded/error-categories>

Balagalle, V. G. (2012). *Bhāṣā adhyayanaya hā simhala vyavahāraya*. S. Godage and Brothers.

Coperahewa, S. (2021). *Dictionary of Sinhala spelling*. S. Godage and Brothers.

Google. (2022). Google Translate. <https://translate.google.com>

NIE-Sri Lanka. (2021). *Simhala lēkhana rītiya*. National Institute of Education, Sri Lanka.

Subasa. (2022). Subasa: Tamil - Sinhala Translator (Version 1.0). <https://mt.subasa.lk>

**ADAPTATION AS A STRATEGY IN TRANSLATING
CULTURE-SPECIFIC EXPRESSIONS: A
COMPARATIVE ANALYSIS OF THE ENGLISH
DRAMATIC TEXT 'THE PROPOSAL' TRANSLATED
BY JULIUS WEST AND ITS SINHALESE
ADAPTATION BY U. A. GUNASEKARA**

G.G.R. Hashara^{1*}, A.A. Munasinghe², W.A.K.H. Weerasinghe³
^{1, 2, 3} *Department of Languages, Sabaragamuwa University of Sri Lanka*

Abstract

Adaptation involves substituting culturally unknown elements in the source language with a familiar one in the target language to ensure the translation is culturally appropriate for the target audience. This study aims to analyse adaptation as a strategy for translating cultural expressions, specifically examining how adaptation strategies are applied when translating culture-specific expressions from English to Sinhalese based on Peter Newmark's (1988) cultural categories. The present study employed a qualitative content analysis using a purposive sampling technique to identify the culture-specific expressions and their target language equivalents. A detailed textual analysis was carried out to demonstrate how the translator adapted the target text to align with the preferences and expectations of the target readers. Accordingly, it was identified that the translator has used adaptation strategies to translate culture-specific expressions while giving more prominence to Sinhalese colloquial expressions through the target language and culture facilitating the receptor's understanding of the original concepts.

Keywords: *Adaptation, Adaptation Strategies, Cultural Categories, Culture-Specific Expressions*

*Corresponding author: Tel.: +94 (77) 256 0637; Email: hasharaini@gmail.com

Introduction

Translation is defined as the process of transferring the meaning of a text from the source language to the target language. When reproducing a concept of the source language in the target language, the translator has to deal with two cultures simultaneously. Each culture owns its cultural nuances including its literature. It is difficult to preserve accuracy and precision while translating these cultural nuances into another language. In such circumstances, adaptation assists the translator in transferring the source text according to the target language's culture. The present study intends to find out how culture-specific expressions have been translated using adaptation, as a strategy in the English translation of the dramatic text 'The Proposal' translated by Julius West and its Sinhalese adaptation, 'Maṅgul Prastāva' by U. A. Gunasekara (1951).

The research problem is as follows:

How has the adaptation strategy been employed in translating culture-specific expressions in the Sinhalese adaptation 'Maṅgul Prastāva' by U. A. Gunasekara (1951)?

This study also focuses on these research questions:

- What types of culture-specific expressions have been adapted to Sinhala during the translation process?
- What adaptation strategies have been employed in translating culture-specific expressions?

Material and Methods

This study focuses on culture-specific adaptation in the English translation of the dramatic text 'The Proposal' translated by Julius West and its Sinhalese adaptation by U. A. Gunasekara (1951). The study employs a qualitative content analysis approach, using a purposive sampling technique. To examine the adaptation of culture-specific expressions, primary data was collected from the source dramatic text and its target dramatic text as per the cultural categories of Peter Newmark (1988): "ecology," "material culture," "social culture," "organisations, customs, and ideas," and "gestures and habits" as they provide a structured framework for identifying and analysing culture-specific expressions, directly supporting the objective of examining adaptation strategies in translating these cultural elements from English to Sinhalese.

Previous research papers, e-books, and journal articles were used as the secondary data of the research. Finally, the collected data were categorised by the seven adaptation strategies proposed by Zhonglian Huang and Yongzhong Zhang (2020): adding, deleting, editing, narrating, condensing, integrating, and altering. Adding contains more information while deleting has less information than its original work and its entire translation. Editing has the same amount of information as the original work and its complete translation or less. Narrating has similar information, however in condensing the original work's information needed to be more condensed. Integrating includes both the original work and its full translation whereas altering corresponds to the original work and its entire translation.

Results and Discussion

The results of this study were collected by comparing and analysing the English translation of the dramatic text 'The Proposal' translated by Julius West and its Sinhalese Adaptation, 'Maṅgul Prastāva' by U. A. Gunasekara.

Table 1:

Social Culture

	ST	TT	Adaptation Strategy
Leisure	Shooting (P.10)	කරන්ත රේස් එකකට (Karatta rēs ekakata) (P.135)	Altering

Table 2:

Material Culture

	ST	TT	Adaptation Strategy
Communications	You (P. 2)	ඔහේලගෙ (Ohēlage) (P.124)	Altering
	Going anywhere? (P.2)	බැරක් යනවද? (Bārak yanawada?) (P.124)	Altering
	Hay may rot (P.4)	ගොයම් කනවෙයි (Goyam kanawei) (P.127)	Altering

	Documents (P.5)	ඔප්පු තිරප්පු (Oppu tirappu) (P.128)	Altering
	Head or tail (P.5)	අන්ධර දෙමළ (Andara demala) (P.129)	Altering
	Gentleman (P.7)	උන්නැහෙට (Unnäheta) (P.130)	Altering
	Drunkard (P.8)	රා කොස්සා (Rā kossā) (P.132)	Altering
	Guzzling Gambler (P.8)	සුදු කප්පින්නා (Sūdu kappittā) (P.132)	Integrating
	The stuffed Sausage (P.9)	සිංහ හම පොරවගන්න බූරුවා (Sinha hama poravagatta būruvā) (P.133)	Integrating
	Most who know least (P.12)	හිස් කළේ අඩ වැඩි බව (His kalē aṇḍa vadi bava) (P.137)	Integrating
Clothes	Evening dress, gloves, and so on. (P.2)	ටුවිඩි කෝට් එකක් දාලා, ටුවිඩි රෙද්දක් ඇඳලා, අතේ මුදු පුරවලා, දිලිසෙන සපත්තු දෙකක් දාලා. (Tuvid kōt ekak dalā, tuvid reddak āṇḍalā, atē mudu puravalā, dilisena sapattu deka dālā) (P.124)	Adding
	Apron and négligé (P.3)	Not translated	Deleting

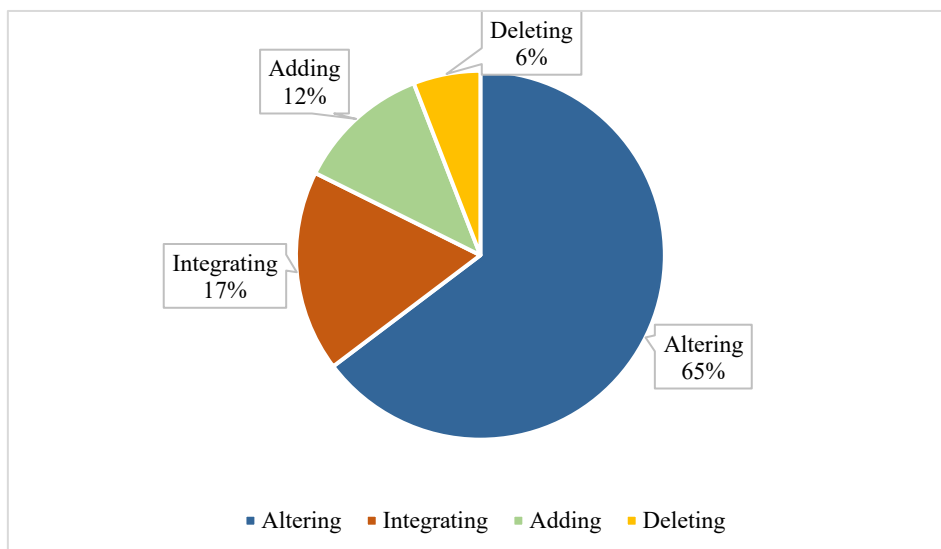
Houses	A drawing room (P.1)	නිවසෙහි ආලින්දය (Nivasehi ālindaya) (P.123)	Altering
--------	-------------------------	---	----------

Table 3:*Ecology*

	ST	TT	Adaptation Strategy
Plants	Peas (P.3)	වී (Vī) (P.126)	Altering
Animals	My very best dog (P.10)	මගේ හොඳම ගොනා (Magē hoṇdama gonā) (P.135)	Altering

Table 4:*Gestures and Habits*

	ST	TT	Adaptation Strategy
	Squeezes his hand (P.2)	උරහිස් දෙකෙන් අල්ලා ඔහු සොලවමින් (Urahis deken allā ohu solavamin) (P.123)	Adding

Figure 1:*Percentages of Adaptation Strategies Used in Maṅgul Prastāva*

Results indicate that 4 out of 7 strategies of Zhonglian Huang and Yongzhong Zhang (2002) have been employed in translating culture-specific expressions in the target text. As per the chart, altering is the most frequently utilised strategy. According to this strategy, it works effectively in most, if not all, languages since meaning in the semantic field is not language-dependent. Through this strategy, the translator was able to maintain the naturalness of both the source language and the target language.

Conclusion and Recommendations

In conclusion, the researchers mainly aimed at focusing on adaptation as a strategy for translating cultural expressions in this study. To identify the culture-specific expressions, the researchers have used Peter Newmark's cultural category (1988) and to analyse them seven adaptation strategies proposed by Yongzhong Zhang & Zhonglian Huang (2002) were used. Throughout the target text, the translator has most frequently employed the altering strategy with 65%. Examining the overall frequency of strategies used by the translator in translating culture-specific expressions, the translator has enhanced the connection between source and target texts and between source and target audiences. Since this study only examined culture-specific expressions related to adaptation and the cultural categories proposed by Peter Newmark, it is recommended that future research explore additional aspects of adaptation beyond culture-specific expressions, such as analysing other types of texts, including novels, poetry, or non-literary works, to examine if adaptation strategies vary across genres.

References

Fernandez Guerra, A. (2012). Translating culture: Problems, strategies, and practical realities. *A Journal of Literature, Culture, and Literary Translation*, 3(1), 1–27.

Huang, Z., & Zhang, Y. (2020). *Variational translation theory* (1st ed.). Springer Singapore.

Newmark, P. (1988). *A textbook of translation*. Prentice Hall International.

Sarachchandra, E. (2000). *Kalpana lokaya* (6th ed.). S. Godage & Brothers Publishers.

West, J. (1889). *The proposal*. Duckworth.

.

ANALYSING GOTTLIEB’S STRATEGIES FOR TRANSLATING SINHALESE COLLOQUIAL EXPRESSIONS INTO ENGLISH SUBTITLES: A CASE STUDY OF THE FILM “MACHAN” DIRECTED BY UBERTO PASOLINI

T.P. Subasinghe^{1*}

¹*Department of Language, Faculty of Social Sciences and Languages
Sabaragamuwa University of Sri Lanka.*

Abstract

Subtitling is a comparatively modern and popular sub-discipline in translation. The present research aims to identify how Gottlieb's (1992) ten subtitling strategies were used to translate the Sinhalese colloquial terms into English in the Sinhala film "Machan" with frequencies and percentages. A qualitative corpus-based method was adopted to conduct the research, where the primary data of the research, which consists of fifty-three (53) colloquial dialogues in the film, was thoroughly analysed based on Gottlieb's classification. It was found through the study that the subtitler has used six Gottlieb's strategies to translate the specified dialogues. Paraphrase is the most frequently used strategy, which accounts for 36% followed by expansion (25%), imitation (9%), condensation (11%), deletion (15%), and transfer (4%). The strategies of resignation, transcription, decimation, and dislocation have not been employed.

Keywords: *Audiovisual Translation, Colloquial Expressions, Subtitling, Target Audience, Translation Strategies*

*Corresponding author: Tel.: +94(76) 2445921; Email: subasinghep92@gmail.com;

Introduction

In this research, the researcher exclusively focuses on inter-lingual subtitle translation, which refers to reproducing verbal messages of different languages in filmic media in the form of one or more lines of written text, presented on the screen, synchronising with the original verbal message (Gottlieb, 2004).

The researcher's primary focus is to perceive the frequency and contextual use of Gottlieb's subtitling strategies when translating colloquial expressions in "Machan" Sinhalese film (2008) directed by Uberto Pasolini, providing new insights into subtitle translation, particularly translating Sinhala colloquial expressions into English.

Trask (1999) defines colloquial speech as ordinary, relaxed, and informal speech used in casual settings where it does not require formal language to be used, especially in day-to-day conversation. Further, he argues that colloquial speech differs from slang: some people tend to use slang in informal speech, while others hardly use it in casual conversations. In general terms, colloquial expression may be defined as informal words, phrases, or idioms commonly used in everyday conversation rather than in formal speech or writing.

Material and Methods

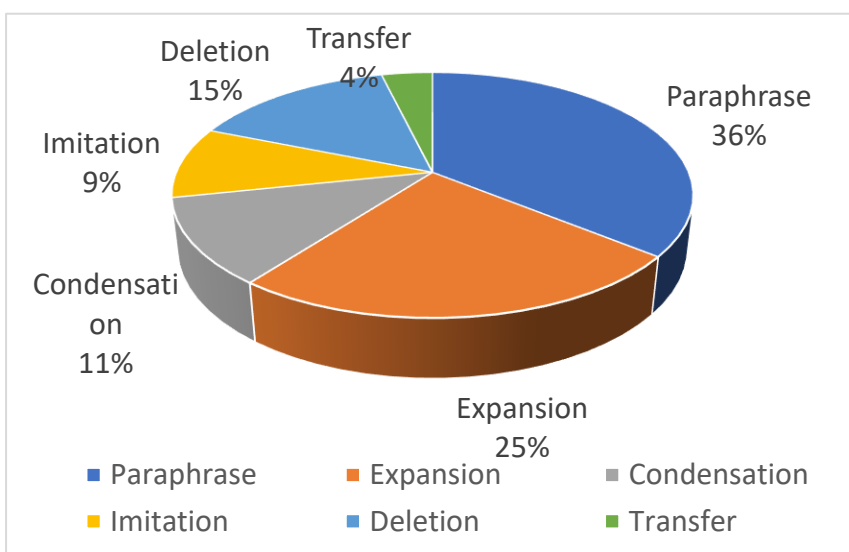
The research method used to analyse this problem is a qualitative method, as it investigates the use of Gottlieb's ten (10) subtitling strategies through the frequency of their application in the process of translation. Both primary and secondary data were collected through observation. As primary data, fifty-three (53) colloquial expressions were identified from dialogues in the Sinhalese movie "Machan" based on Trask's definition of colloquial speech. Secondary data were collected through online resources. The classification of interlingual subtitling strategies that was introduced by Gottlieb in 1992 was applied to analyse data. The rationale behind selecting this movie is that the movie is extremely rich with colloquial expressions. The Sinhalese colloquial expressions were then compared with the relevant synchronised English subtitles to identify how Gottlieb's strategies have contextually been used to translate those terms into English. The analysis concluded by indicating the frequency and percentage of strategies used.

Results and Discussion

The key findings of the research are presented in Table 1 and Figure 1, showing the frequency and percentage of each strategy in the selected movie.

Table 1:*Frequency of Strategies*

Strategy	Data
Paraphrase	19
Expansion	13
Condensation	6
Imitation	5
Deletion	8
Transfer	2
Total	53

Figure 1:*Percentage of Gottlieb's Strategies in the Movie*

Based on the results indicated in the graph, the subtitle writer has employed six of Gottlieb's subtitling strategies to translate the colloquial expressions included in the movie. According to the chart, the most frequently used strategy is paraphrasing, and it accounts for 36%. The other techniques and their percentages are as follows: expansion (25%), imitation (9%), condensation (11%), deletion (15%), and transfer (4%).

The Sinhalese spoken language is presumed to be highly colloquial, and it consists of a large number of slangs and other informal expressions. The following discussion part will explore how the translator successfully employed these strategies to translate Sinhalese colloquial expressions, providing several examples from the movie.

The most frequently used strategy, paraphrasing, involves the use of different phraseology to convey the meaning of various colloquial expressions, making

them more accessible to the target audience. This example vividly showcases how the meaning of the Source Language (SL) expression is translated using a different grammatical structure.

Excerpt 1

SL: උඹ අපිව නැති කරා (20.39)

TL: You ruined us.

Excerpt 2

SL: ජර්මන් කැලී (24.14)

TL: German women

Next Strategy Expansion is employed when the SL dialogue requires an explanation to describe nuanced words or expressions in SL.

Excerpt 3

SL: ජර්මනිය කියන්නේ කුණු ගොඩක්. (16.4)

TL: ...Must be a Fucking dum.

Here the literal translation for SL term “කුණු ගොඩ” is “Dum”. However, the translator enhances its colloquial sense by making some additions to the Target Language (TL) expression.

The third strategy, Condensation is generally used to shorten the text in the least obtrusive way possible. However, it does not distort the meaning of the dialogue.

Excerpt 4

SL: උඹ ළඟ ගිනිදර තියනවද? (17.15)

TL: Got a lighter?

The above SL term is commonly used to ask for something to light a cigarette. The dialogue was translated more concisely while preserving its colloquial sense.

Excerpt 5

SL: ආතක් පාතක් නැති අනාතයෝ (02.51)

TL: Bums

In Imitation, the translator preserves the same form, typically with names of people and places.

Excerpt 6

SL: ස්ටැන්ලි, මම (02.39)

TL: Stanly, Machan

In Deletion, the translator entirely eliminates several SL colloquial expressions when translating them to TL.

Excerpt 8

SL: යකෝ ඒ රටවල් හොඳයි. (03.06)

TL: Those are good countries

Excerpt 9

SL: ණ...ඔයා ලකී නේ. (29.07)

TL: You're lucky...

Here the translator intentionally omits the words “යකෝ” and “ණ” in translation.

The last strategy, Transfer has been applied to transfer the full SL expression literally into the TL.

Excerpt 10

SL: විසා සල්ලි

TL: Visa Money

Conclusion and Recommendations

In conclusion, this research highlights the frequency and percentage of Gottlieb's subtitling strategies in translating colloquial expressions. Paraphrasing emerged as the most frequently used strategy. Finding equivalents for Sinhalese colloquial expressions in English is considerably challenging. Therefore, the translator has frequently employed alternative English terms to convey these expressions effectively, ensuring that the informal tone and nuanced words were appropriately conveyed to the target audience while adhering to the technical constraints of subtitle translation. This study is expected to expand the knowledge of subtitle translation techniques, particularly in translating Sinhalese colloquial terms.

References

Gottlieb, H. (1992). Subtitling: A new university discipline. In C. Dollerup & A. Loddegaard (Eds.), *Teaching translation and interpreting: Training, talent*

and experience (pp. 161-170). John Benjamins Publishing Company.

Kendawg McAwesome. (2024, April 13). *Machan (2008) | Sinhala full film | මචන් ඩිංහල film | English & Dutch subtitles* [Video]. YouTube. <https://www.youtube.com/watch?v=A0o0lxUxH4M&t=1747s>

Perez-Gonzalez, L. (2020). Audiovisual translation. In M. Baker & G. Saldanha (Eds.), *The Routledge encyclopedia of translation studies* (3rd ed., p. 34). Routledge. https://www.academia.edu/65557088/_2020_Audiovisual_Translation

Strategies in subtitling Black English movies. (n.d.). *TranslationDirectory.com*. Retrieved June 15, 2024, from <https://www.translationdirectory.com/articles/article2385.php>

Trask, R. L. (1999). *Key concepts in language and linguistics*. Routledge. (Original work published 1999).

RESOLVING THE UNTRANSLATABILITY OF RELIGIOUS-SPECIFIC TERMINOLOGIES IN THE NON-LITERARY TEXTS THROUGH THE APPLICATION OF SPECIFIC TRANSLATION PROCEDURES

Manohar Sritharan Dhivia^{1*}

¹*Department of Translation Studies
University of Jaffna*

Abstract

The study aimed to explore problems in translating religious terminologies from English to Tamil, focusing on the concept of untranslatability. It delves into this concept and analysed how this issue can be addressed using procedures in translation theory and practice. The primary data for this research were collected through a comparative analysis of 'A Vision of Sri Lanka for the 21st Century' and its translation into Tamil, utilising a qualitative research approach using a content-analysis method. The analysis of the study focused on the (1) analysis of existing untranslatable religious-specific terminologies, (2) analysis of untranslatable borrowed religious-specific terminology and (3) analysis of untranslatable descriptive religious-specific terminology. The study suggested a tendency to translate religious terminologies by identifying specific procedures modulation, notes and couplets, which can help overcome the cultural problems inherent in non-literary texts. This research provides insights into translators' decision-making processes, aiding in the development of theories and enhancing text quality.

Keywords: *Problems, Procedures, Terminology, Texts, Untranslatability*

**Corresponding author: Tel.: +94 (71) 336 9153; Email: dhiviasri3@gmail.com;*

Introduction

Translating religious concepts into Tamil may result in losing nuanced meanings and associations. Religious terms may convey culture-specific items in non-literary texts, as they may be related to ecology, social life, customs, interests, and private passions. Peter Newmark (1988, p. 32) argues that cultural differences in translation are more problematic than linguistic differences, as they are unique to the source language and cannot be easily translated. At this point, this study investigates the issue of untranslatability, and explains how it might be encountered in translation theory and practice, with a focus on the research problem, ‘What are the problems faced in translating religious texts from English to Tamil, and how do these challenges impact the fidelity and transparency of the translated content?’.

Literature Review

‘Religious Terms and Their Translation Strategies in the Novel: English into Indonesian’, a study by Wulandari (2020) highlights that religious texts dealing with bilingual meaning components are difficult to guess and understand for the people belonging to a different culture. Therefore, strategies such as borrowing, literal translation, transposition, modulation, equivalence, and adaptation are necessary to produce a good translation and bridge the information gap in the translation process. As a result, the message in the source language can be accurately, clearly, and acceptably conveyed in the target text.

In the book *Handbook of Translation Studies: Volume 1* (pp.285-293), Naude (2002) points out that sacred texts cannot fulfil the same communicative functions in modern societies as those for which they were intended in their original social and cultural setting. Therefore, a target-oriented strategy is essential for translating sacred texts effectively. This approach involves defining a new Function or Skopos independently of the original functions to ensure the text's relevance and impact on the target context.

Material and Methods

This study is based on a qualitative research approach. This research uses the content analysis method since this study relies on analysing the presence and meaning of words, phrases, sentences, themes, and concepts within the given translation. Accordingly, the sourcebook and its translation are used to gather information for content analyses. The data are gathered, categorized, and analysed in the following manner:

Primary Data: The primary data for the analysis were drawn from the source text 'A Vision of Sri Lanka for the 21st Century' and the target text "21 Mk; E}w;whz;Lf;fhd ,yq;ifapd; njhiyNehf;Fg;ghu;it (2023)".

Secondary Data: The secondary data are obtained from research papers, journals, books, and theses.

This research examines cultural and terminological issues in translating religious phrases from Christianity and Buddhism while presenting them for discussion.

Results and Discussion

Translation is not merely rewriting a text in a different language; it is also reproducing the ideologies behind the language of the source text. This timeless adage encapsulates the complex nature of language, especially when the cultural contexts differ significantly by presenting challenges for translators in terms of meaning. Therefore, the issue of finding equivalence presents numerous problems, leading to areas of untranslatability. Accordingly, the problems can be analysed as follows:

Analysis of Existing Untranslatable Religious-Specific Terminology

Religious terms describe concepts related to religion, encompassing beliefs, and cultural aspects of a particular text.

Table 1:

Source Text	Target Text	Translation Procedure
According to Christianity and other theistic religions the individual soul must surrender himself fully to the Divine Will or the Universal Will or the totality.	fpwp];jtk; kw;Wk; gpw ,iwapay; kjq;fspd;gb> xt;nthU jdpegupd; Md;khthdJ nja;t rpj;jk; my;yJ nghJTyf rpj;jk; my;yJ Kw;WKOjhd rpj;jj;jpw;F jd;id KOikahf xg;Gf;nfhLf;f Ntz;Lk;.	Translation by modulation

In Christian tradition the divine will is known as jpUr;rpj;jk;> Njtrpj;jk;. However, the considering other theistic religions 'divine will' is translated as “nja;t rpj;jk;”. Even though 'universal will', when directly translated, will be 'cyfshtpa rpj;jk;”, it is translated as “nghJTyf rpj;jk” to relate it to the context. Moreover, the direct translation for 'surrender' will be ‘ruziljy;’ as per other

religious terminology. However, considering Christian term ‘xg;Gf; nfhLj;jy;’, it is translated as widely used in the religious context.

Newmark (1988, p.88) defines modulation as the alteration of a message in the TL text due to differing viewpoints in the SL and TL. For example, in the Tamil translation of religious texts from various theistic traditions, the term ‘nja;t rpj;jk;’ is commonly used to refer to divine will. This usage can be found in texts such as the gftj; fPij and the jpUthrfk;. Similarly, the term 'xg;Gf; nfhLj;jy;’ can be found in religious literature, where it is used to describe the act of surrendering oneself to the divine will. By adapting the terminology to align with the source text and the religious traditions, “modulation” procedure is adapted to best align with the source text.

Analysis of untranslatable borrowed religious-specific terminology.

English borrows words from other languages. Borrowing refers to the case where a word or an expression is taken from the SL and used in the TL, but in a ‘naturalised’ form.

Table 2:

Source Text	Target Text	Translation Procedure
In Dharmadweepa, the peaceful teachings of the Enlightened One is preserved in its pure form.	ju;kj;tPgtpy; (epge;jidf;F cl;gl;Jk; cl;glhjJkhd jd;ikfs; midj;Jk; nfhz;l ngsj;j rkaj;ij gpd;gw;Wk; epyk;) mwpnthsp ngw;wtupd; mikjpahd Nghjid JJa tbtpy; ghJfhf;fg;gLfpwJ.	Translation by notes

The term "dharmadweepa" cannot stand alone as a transliteration in Tamil to provide the meaning of a testament to its status as an island where the majority of its population ardently adheres to the simple, profound teachings of Buddhism. Nevertheless, additional information should be given using the “notes” procedure. Newmark (1988, p.91) defines the writing notes procedure as providing additional information within a translation through three methods: within, or outside the text, preserving meaning.

Therefore additional information in the translation is given as ‘epge;jidf;F cl;gl;Jk; cl;glhjJkhd jd;ikfs; midj;Jk; nfhz;l ngsj;j rkaj;ij gpd;gw;Wk; epyk;’ to ensure that the meaning of the original text is preserved and fully understood by the target audience. By including explanatory notes within the text, readers can gain a deeper understanding of the concept of the Dharmadweepa and its

significance in Buddhism. This approach allows for a more appropriate and comprehensive translation of the original text.

Analysis of Untranslatable Descriptive Religious-Specific Terminology.

There are limitations to the term "culture," which makes it difficult to translate; in religion, there is a terminology to describe each term considered as a figure which provides valuables to the particular religion.

Table 3:

Source Text	Target Text	Translation Procedure
According to Buddhism, the nature of the world is anicca, anatta and dukha or impermanence, insubstantiality and unsatisfactoriness.	ngsj;jj;jpd;gb> cyfpd; ,ay;G mdpr;r> mdj;j> Jf;f my;yJ cyfpay; tho;tpd; epiyahik> Md;khtpd; Mjhuk; ,y;yhik> Jf;fk;> ntWik vd;gtw;Nwhlh epiwtpd;ik MFk;.	Translation by couplets

The above excerpt consists of cultural terms borrowed to English, originally from Pali and Sanskrit which were used to describe key Buddhist concepts. The author provides the borrowed terms and their natural meanings in English. The target audience is Tamil speakers who may not have a deep understanding of Pali or English. To help the target audience comprehend the borrowed terms and their relevance within the text, the "Couplet" procedure is adapted. This involved directly transferring the imported Pali words into Tamil, while providing additional explanations to aid understanding. Newmark (1988:91) explains that the couplets translation procedure refers to employing two distinct methods to address a single problem. Therefore, two different procedures such as borrowing and descriptive equivalence are adapted.

Conclusion and Recommendations

The research highlights that untranslatability may arise when translating religious terms, cultural references, or nuanced language, particularly in non-literary texts. Modulation, notes, and couplet procedures are used to enhance translation quality and preserve cultural nuances, as far as fidelity and transparency are concerned. Religious translation practice often emphasises the source text, yet it must contend with a myriad of diverse and interrelated contextual factors that can significantly impact the translation process. This intricate process of intercultural, inter-linguistic communication involves a range of sociocultural, organisational, and situational factors, such as language nuances, cultural norms, and institutional practices.

Given the pervasiveness of religion in contemporary society, religious texts must be translated appropriately. Translators must possess a deep awareness of the subtleties inherent in translating religious texts, including the usage of existing and borrowed words and phrases, to prevent misinterpretation or loss of meaning. The translation of a religious text from English to Tamil entails specific procedures to ensure linguistic and cultural accuracy. The primary objective of the research is to underscore the significance of preserving the content and ensuring natural rendering in translating religious terminologies in non-literary texts within the contemporary translation industry.

References

- Baker, M. (1992). *In other words: A coursebook on translation*. Routledge.
- Bassnett, S. (2002). *Translation studies*. Routledge.
- Catford, J. C. (1965). *A linguistic theory of translation*. Oxford University Press.
- Cui, J. (2012). Untranslatability and the method of compensation. *Theory and Practice in Language Studies*, 2(4), 826-830.
- Gunathilaka, D. D. B., & Ariyaratne, W. M. (2019). Overcoming cultural untranslatability: With special reference to Wikramasinghe. *International Journal of Research and Innovation in Social Science*, 3(9), 303-309.
- Jakobson, R. (2004). On linguistic aspects of translation. In L. Venuti (Ed.), *The translation studies reader* (2nd ed., pp. 138-143). Routledge. (Original work published 1959)
- Newmark, P. (1988). *A textbook of translation*. Shanghai Foreign Language

Education Press.

Ordudari, M. (2007). Translation procedures, methods, and strategies. *Translation Journal*, 11.

Vinay, J. P., & Darbelnet, J. (2004). A methodology for translation. In L. Venuti (Ed.), *The translation studies reader* (pp. 128-137). Routledge.

EXPLORING TRANSLATION THEORIES: FROM PRESCRIPTIVE TO THE TRANSLATION OF SPECIALIZED MEDICAL TERMINOLOGIES FROM ENGLISH TO TAMIL

T. Thilaxci^{1*}

¹*Department of Translation Studies, University of Jaffna*

Abstract

This study tackles the problems of translating specialised medical terms from English into Tamil. The purpose of the study is to display the difficulties of translating medical terms and how they were tackled by the translator for the purpose of laymen and experts. The study adopts a qualitative approach. “Hypertension Silent Killer” as the source text focuses on different types of medical terms. The analysis can be categorised as Nida’s Formal and Dynamic Equivalence (1964), Peter Newmark’s Communicative and Semantic method (1988), Kollar’s connotative equivalence approach (1989), Vinay and Darbelnet’s Techniques of translation (1995) and Newmark’s sixteen Translation procedures (1988). The findings reveal that without mastering the translation theory, a translator will only comprehend that translating is nothing more than transferring the language. This study will help Translation Studies undergraduates and researchers understand the need of translation theories related to specialised medical terminologies.

Keywords: *Equivalence, Medical Terminologies, Procedures, Scientific, Techniques*

*Corresponding author: Email: thilaxci0406@gmail.com;

Introduction

This study aims to enhance medical translation accuracy by focusing on understanding source information and localising it. It will provide a comprehensive understanding of current accuracy in translating medical terminologies from English to Tamil. Implementing translation procedures and best practices will improve translation quality and precision in healthcare settings, facilitate research collaborations, support medical education, and help undergraduates and researchers understand equivalence in medical translation. The aim of the study is to identify the terminological issues that affect the medical translation from English to Tamil. Medical translation is one of the most difficult types of translation which leads to a great challenge and one requires excellent knowledge to overcome the barriers. Therefore, the objectives of this research are: -

1. To identify the most problematic area in medical translation
2. To apply the appropriate procedures to solve the problems.

Material and Methods

This study applied a qualitative research approach. It has been done based on the method of Content analysis. The first phase in a qualitative content analysis process is selecting a book in a particular field and completing translation work. When conducting a content analysis, this study typically collects information from written text such as the source book “HYPERTENSION- The Silent Killer” with the translation titled “cau; ,uj;j mOj;jk;- nky;y nfhy;Yk; tp~k;”. Data for the study are collected from various sources such as from books, thesis, research papers, and articles. Such sources are obtained from Public Library Jaffna and through websites. Following textual comparative analysis which aims at comparing and contrasting between English medical texts and Tamil medical texts.

Results and Discussion

The study identifies terminological issues in translating medical texts from English to Tamil using Nida's Formal and Dynamic Equivalence (1964), Peter Newmark's Communicative and Semantic methods (1988), Kollar's connotative equivalence approach (1989).

Nida's Formal and Dynamic Equivalence

Formal equivalence aims to maintain a close resemblance to the original text without incorporating the translator's ideas, while dynamic equivalence uses the original language "sense for sense" by translating each sentence or thought into a sentence in the target language without using the exact phrasing or

idioms (Nida1964: 159).

Example: -01

Source Text: -Mild-180 mm Hg SBP or 110 mm Hg DBP

Target Text: - Xusthd ghjpg;G 180 mm Hg SBP my;yJ 110 mm Hg DBP

Applied Procedure of Translation: - Nida's Formal Equivalence

Revised Target Text: - ,ja RUq;ftpaf;fk; 180 mm Hg MfTk; ,ja tpuptpaf;fk; 110 mm Hg MfTk; cs;s NghJ mJ rhjhuz ghjpg;ghfNt fUjg;gLk;.

Applied Procedure of Translation: - Addition

The researcher provides a translated version of the source text in Tamil, using the SOV pattern for comprehension, despite the English language structure not following this pattern.

,ja RUq;ftpaf;fk; 180 mm Hg MfTk; ,ja tpuptpaf;fk; 110 mm Hg MfTk; cs;s NghJ mJ rhjhuz ghjpg;ghfNt fUjg;gLk;.

Peter Newmark's Communicative and Semantic Method

Semantic translation focuses on the word or word-group, while communicative translation aims to produce an effect similar to the original. Accuracy is crucial in communicative translation, as a translator must maintain the original message and avoid rewriting if they fail to do so.

Example 1

Source Text: - The baby should be delivered vaginally wherever possible.

Target Text: - Kbe;jtiu Foe;ijia Nahdp topahfNt gpurtpf;f Ntz;Lk;.

Applied Procedure of Translation: - Newmark's Semantic Translation

Revised Target Text: - Kbe;jtiu Foe;ijia Rfg;gpurtk; (normal delivery) %yNk gpurtpf;f Ntz;Lk;.

Applied Procedure of Translation: - Newmark's Communicative Translation

In this case vagina has an equivalent in Tamil as Nahdp but that is not in a usage usually one gives birth to a child people always ask that normal or cesarian this is the actual way of asking therefore it is translated with the focus on the target audience.

Kollar's Connotative Equivalence Approach

Denotative equivalence and connotative equivalence place emphasis on lexis terms and seek equivalence of lexical meanings between source text and target

text. In translation, connotative equivalence is more difficult to achieve than denotative equivalence. As Koller (1989: 189) put it: “it (connotative equivalence) is one of the most difficult problems of translation, and in practice is often only approximate.” The reason is that in most cases, translators cannot translate the source text literally but need to take a lot of factors into consideration, such as cultural factors, social background, the original author’s emotions and intentions, etc.

Example: -01

The medical suffix “osis” means disease process or condition therefore the word Renal artery stenosis is translated by rpWePuf ehb Neha; epiy as per the direct meaning of the suffix but as per the implied meaning it is translated with the help of Dr. Kumaravel “rpWePuf ehb milg;G”

Vinay and Darbelnet’s Techniques of Translation

Vinay and Darbelnet (1995) proposed seven methods or procedures. Here, the researcher explained the use of borrowing and literal translation.

Borrowing refers to transferring a source text word directly into the target language the easiest method of translation is borrowing. The following are examples of borrowing.

Table 1:

Source Text	Target Text
Serum creatinine	rPuk; fpupNal;bd;
Plasma	gpsh];kh
Conn	Nfhd;
Cushing	F~pq;];
Albumin	my;Gkpd;
Cocaine	Nfhf;ifd;
Ultra sound	my;luh rTz;L

Cronin (2003: 119) shows that "literal translation is one of the most frequently used translation strategies in medical text". In terms of literal translation, this is the substitution of TL syntactic structures, which are isomorphic and content-synonymous, with SL syntactic structures, which are typically found on the clause/sentence scale.

Table 1:

Source Text	Literal Translation
Passive oedema	capu;g;gw;w ePu;f;Nfhit
Radial pulse	Mu ehb
Abdominal tenderness	tapw;Wg;Gw typ
Placental abruption	eQ;Rf;nfhb tpyf;fk;
Glomerular filtration rate	fyd; Nfhs; tbfl;Lk; tPjk;

Newmark's 16 Translation Procedures

In this study the researcher analyses the procedures such as transference, descriptive equivalent and paraphrase. Transference is the process of converting a SL word to a TL text, including transliteration. Paraphrases provide explanations and clarification, aiding readers in understanding phrases. Descriptive translation uses a description to characterize a term or phrase in the source, rather than directly translating it.

Example: - 01

Source Text: -CT and MRI scan are useful to diagnose renal artery stenosis; and renal parenchymal disorders

Target Text:-fzpdptop clYWg;G Clfjpu;glk; kw;Wk; fhe;j mjpu;T miy tiuT vd;gd rpWePuf jkdp RUf;fk; kw;Wk; rpWePuf nraw;ghl;L NfshW vd;gtw;iw fz;lwpapwe;jitahFk;.

Applied Procedure of Translation:- Literal Translation

Revised Target Text:- rpWePuf jkdp RUf;fk; kw;Wk; rpWePuf nraw;ghl;L NfshW vd;gtw;iw fz;lwpapw CT];Nfd; kw;Wk; MRI];Nfd; vd;git rpwe;jitahFk;.

Applied Procedure of Translation:- Transference

To translate the text, the researcher uses the process of transferring an SL word to a TL text is known as transference (Newmark, 1988: 81). Transliteration, or the conversion to alternate alphabets, is another part of it. When a translator chooses to use an SL word exactly as it is in TL. In English-Tamil translation, transference is frequently seen, particularly when translating terminology that the intended audience is familiar with.

Example:- 02

Source Text:- BP measurements are taken either using auscultatory or

oscillometers methods.

Target Text:- Xyp topr; Nrhjid kw;Wk; miyT tiutp mstPl;L Kiwfis gad;gLj;jp ,uj;j mOj;j mstPLfs; mstplg;gLfpd;wd.

Applied Procedure of Translation: - Literal Translation

Revised Target Text:- ,uj;j mOj;j mstPLfshdJ];nlj];Nfhg; %yk; mjhtJ ,jak;> Eiuapuy; kw;Wk; Gw cWg;Gfspd; xypfis Nfl;gjd; %yNkh my;yJ xU Cjg;gl;l Rw;W gl;ilia Nky; ifia Rw;wp ,aj;jpd; mNj nrq;Fj;J cau;jjpy; itj;J ghjurk; ,izf;fg;gLtjd; %yKk; mstplg;gLfpd;wJ.

Applied Procedure of Translation: - Newmark's Descriptive Equivalence

Example:-03

Source Text:- Studies have shown that WCH can be decreased by reducing anxiety through improved relationships between the patient and their healthcare provider

Target Text:- Nehahspf;Fk; mtu;fsJ Rfhjhu Nrit toq;FeUf;Fk; ,ilapyhd Nkk;gl;l ,zf;fj;jpD}lhf gjl;l;j;ijf; Fiwg;gjd; %yk; nts;is rl;il FUjp mKf;fj;ij Fiwf;f KbAk; vd;W Ma;Tfs; fhI;Lfpd;wd.

Applied Procedure of Translation:- Word for Word

Revised Target Text:- Nehahspf;Fk; mtu;fspd; Rfhjhu toq;FeUf;Fk; ,ilapyhd Nkk;gl;l ,zf;fj;jpD}lhf gjl;l;j;ijf; Fiwg;gjd; %yk; kUj;Jt re;jpg;gpd;NghJ kl;Lk; Vw;gLk; cau; ,uj;j mOj;jj;ij Fiwf;f KbAk; vd;W Ma;Tfs; fhI;Lfpd;wd.

Applied Procedure of Translation:-Newmark's Paraphrase

Here, WCH means White Coat Hypertension which indicates that the patient gets anxiety once they see the doctor indirectly states that white coat (doctor's coat) in the medical sector they use the equivalent nts;is rl;il FUjp mKf;fj;ij it is translated in a word- word manner; but the target audience will not understand it and this will lead mistranslate the context, therefore, the researcher clearly express the meaning of WCH as per the laymen's view.

Conclusion and Recommendations

This study evaluates issues and solutions in medical translation, focusing on challenges in interpreting various terminologies like trade names, formulas, drug names, dosages, measurements, abbreviations, polysemy, synonyms, and cultural terms. Based on the analysis of the book "HYPERTENSION: - The Silent Killer" and compared with its translation "cau; ,uj;j mOj;jk;: nky;y nfhy;Yk; tp~k;" The study highlights the importance of understanding

different medical translation genres, their communicative purposes, structure, and usage for successful translation. It discusses the challenges and solutions, including effective use of translation procedures and the use of various translation theories, emphasising the need for continuous study and adaptation to the ever-changing medical field.

The study focuses on terminological issues in translating medical texts from English to Tamil using translation procedures. Future research should address phonological difficulties in medical terminologies, produce one-to-one equivalents, and translate related diseases while categorising terms and compiling separate glossaries for each disease.

References

- Montalt, V., Zethsen, K., & Karwacka, W. (2018). Medical translation in the 21st century: Challenges and trends.
- Newmark, P. (1979, December 1). A layman's view of medical translation. *The BMJ*, 2(6202), 1405. <https://www.bmj.com/content/2/6202/1405>
- Newmark, P. (1981). *Approaches to translation*. Pergamon Press.
- Nida, E. (1964). *Towards a science of translating*. E.J. Brill.
- Pym, A. (2010). *Exploring translation theories*. Routledge.

EXPLORING THE CHALLENGES FACED BY INTERPRETERS: WITH SPECIAL REFERENCE TO SIMULTANEOUS PARLIAMENTARY INTERPRETERS IN SRI LANKA

K.H.D.I. Kariyawasam^{1*}, and W.M. Ariyaratne²

^{1,2}*Department of Languages, Sabaragamuwa University of Sri Lanka*

Abstract

This study explores the linguistic, cultural, and cognitive challenges faced by parliamentary interpreters in Sri Lanka, where Sinhala, Tamil, and English are used in parliament according to the official language policy. The research question examines the challenges faced by parliamentary interpreters in Sri Lanka. Primary data were collected by conducting in-depth interviews with eleven simultaneous parliamentary interpreters working in Sinhala-English, Sinhala- Tamil and Tamil-English language pairs. In contrast, secondary data were collected from previous studies. Collected data were analysed using content analysis with the Interpretive Theory of Translation by Danica Seleskovitch. The findings reveal that simultaneous parliamentary interpreters in Sri Lanka encompass challenges due to the fast-paced nature and other contextual factors of the parliamentary setting. This study further contributes valuable insights to the field of Translation Studies while clearly indicating the challenges faced by parliamentary interpreters in Sri Lanka.

Keywords: *Interpretation, Multilingual, Parliamentary interpreter, Simultaneous interpretation*

*Corresponding author: Email: dulminiimalsha@gmail.com;

Introduction

The present study deals with the field of interpretation studies, which is a relatively new academic area that has expanded explosively in recent years, presenting many research problems for researchers. Though the history of translation is traced back to the beginning of human civilisation, it has been studied as a proper discipline only since the 1970s. Although there are some studies on interpretation in other countries, no research has been conducted in Sri Lanka related to simultaneous parliamentary interpretation.

Bell (1991) defines interpretation as the process of presenting in the target language (TL) the exact meaning of what is uttered in the source language (SL), whether consecutively or simultaneously while preserving the tone of the speaker.

Simultaneous interpretation facilitates seamless communication. Gile (1995) states that it is important to note that interpreting is not an easy task, that not everyone can make a good interpreter, and that it requires special cognitive skills and not a mastery of grammar. More recently, the research of Claudia Angelelli (2017) has focused on the socio-professional aspects of interpreting, highlighting the imotional challenges faced by interpreters in navigating the complex dynamics of communication. Thus, upto now these studies collectively contribute to the understanding of the multifaceted challenges encountered by interpreters, encompassing cognitive, emotional, and socio-professional dimensions.

The present study is also motivated by the challenges faced by interpreters, consequently, the intention is to study the challenges faced by parliamentary interpreters within the Sri Lankan context.

Material and Methods

To collect primary data, interviews were conducted with parliamentary interpreters of the Sri Lankan parliament. The content analysis method was employed for this research to analyse data. The researchers identified and categorised the issues faced by parliamentary interpreters into three main sections. A set of interview questions was developed, comprising eight to nine questions per section, specifically addressing general questions, linguistic issues, and cultural and cognitive issues. The responses provided by the interpreters were analysed and thoroughly discussed. To ensure a comprehensive and precise understanding of interpretation, Seleskovitch's Theory of Sense (1989) was utilised.

Results and Discussion

Danica Seleskovitch's Theory of Sense, which emphasises the extraction and conveyance of meaning over a word-for-word translation (Seleskovitch, 1989), is pivotal in addressing the linguistic, cultural, and cognitive challenges faced by parliamentary interpreters. Conveying meaning over literal translation is crucial for parliamentary interpreters when dealing with complex jargon, cultural nuances, and varied speech patterns. By focusing on understanding the speaker's intended meaning and context, interpreters bridge cultural differences and ensure messages resonate with the audience. This approach reduces cognitive load, helping interpreters maintain clarity of parliamentary proceedings, thus enhancing communication across linguistic and cultural barriers.

a) Linguistic Challenges

Parliamentary interpreters face linguistic challenges that complicate their tasks. One challenge is syntactic differences between languages. For example, in translating "I want to say that the economy of the country is going haywire" from English to Sinhala, the interpreter must adjust from the English subject-verb-object (SVO) structure to the Sinhala subject-object-verb (SOV) order,

Resulting in "ගරු කථානායකතුමනි, මම මේ මොහොතේ දී කියන්න කැමතියි...." /'garu ka'th̥a:na:jakatuməni, 'mama me: mo'hota: ɖi 'ki:janna kæməti:/ and then add "ශ්‍රී ලංකාවේ ආර්ථිකය වලපල්ලට ගිහිල්ලා." /'fri: lan̥'ka:we 'a:rθikaya 'valapæl[əgi'hil:a/

Idiolectal complexities also pose challenges; an interpreter must recognize unique terms used by individuals, such as “චබකු නෝනා” /tʃabəku 'no:nə/ (Chabaku nona), and correctly translate them to “චන්ද්‍රිකා ඛණ්ඩාරනායක කුමාරතුංග” /tʃand̥rika: b̥and̥a:ra:n̥a:jək ku:ma:rəth̥uŋga/ (Chandrika Bandaranaike Kumaratunga), a former President of Sri Lanka.

Besides these, interpreters must navigate pronunciation difficulties, accurately interpret addresses and statistics, maintain a longer retention period, handle petition presentations and amendments, interpret songs in parliament, manage points of order and disturbances, and deal with phonetic challenges.

b) Cultural Challenges

Parliamentary interpreters face significant cultural challenges. One major challenge is idiomatic expressions. For instance, the Sinhala idiom “වෙස ගැනීමේ පලා මල්ල වගේ” /'we:sa 'gæ:ni:ge 'pɑ:la 'mæl:ə 'væge/ (a woman who involves in prostitution has everyone's dirt in her bag) may need to be softened to “අහවල් ගැනීමේ” /'əhəvəl 'gæ:ni:ge/ (a lady of the street) to be

appropriate for parliamentary discourse. Interpreters must discern contextual cues and provide suitable equivalents to ensure effective communication.

Differences in religious and cultural terminology also pose difficulties. The sense of the Sinhala term " පාදම " /'pɑ:vədə/ cannot be accurately captured by the English word "carpet," requiring interpreters to provide context or explanations.

Additionally, interpreters must navigate cultural and religious sensitivities, rhyming couplets, and literary translations, all of which require deep cultural understanding and adaptability.

c) Cognitive Challenges

Parliamentary interpreters in Sri Lanka face significant cognitive challenges due to the complexity of proceedings and diverse linguistic backgrounds. Using Gile's (1995) Effort Model, these challenges are analysed to understand the cognitive demands of interpretation. Interpreters encounter high demands from rapid speech, technical terminology, and varied topics, necessitating accurate bilingual navigation. High language proficiency, continuous learning, and extensive preparation are crucial, especially for specialised terms. Managing substantial information in working memory often leads to errors during lengthy or complex speeches. Effective cognitive effort management, including strategies like chunking and predicting content, is essential to avoid overload, particularly with unexpected topics or unfamiliar terms. The high-pressure environment and demanding schedules cause fatigue and stress, requiring effective management and relaxation techniques during breaks. Gile's Effort Model (1995) provides insights into the demanding nature of parliamentary interpretation.

Conclusion and Recommendations

Danica Seleskovitch's Theory of Sense is vital for parliamentary interpretation. To address the challenges faced by Sri Lankan parliamentary interpreters, it is recommended to provide continuous professional development on parliamentary terminology and processes and offer peer reviews and mental health resources.

Future research should examine the effectiveness of training programmes and the impact of language policies on interpreter recruitment, training, and service delivery are also crucial. Comparative studies of practices in other countries could provide valuable insights and best practices. These efforts could contribute to enhancing the effectiveness of parliamentary interpreting in Sri Lanka.

References

- Angelelli, C. V. (2017). The socioprofessional challenges of interpreters: The case of medical interpreting. In *The interpreter's companion* (pp. 27-43). Springer.
- Bell, R. (1991). *Translation and interpreting: A practical guide*. Routledge.
- Gile, D. (1995). *Basic concepts and models for interpreter and translator training*. John Benjamins Publishing Company.
- Seleskovitch, D. (1989). Interpreting for international conferences: Problems and strategies. In R. K. P. H. A. D. W. H. K. K. R. M. K. (Eds.), *Interpreting: Theoretical issues* (pp. 35-50). John Benjamins Publishing Company.

PRESERVING HUMOUR DURING FANSUBBING: WITH SPECIAL REFERENCE TO THE ENGLISH COMEDY MOVIE ANCHORMAN: THE LEGEND OF RON BURGUNDY

I.M. Ratnayake^{1*}

*¹Department of Languages, Faculty of Social Sciences and Languages,
Sabaragamuwa University of Sri Lanka*

Abstract

Translating humour into subtitles can be a difficult task because humour encompasses a wide range of linguistic and cultural factors. This research explores the subtitling strategies used to translate humour in the comedy movie *Anchorman: The Legend of Ron Burgundy*, specifically focusing on the fansubbing of the movie from English to Sinhala. The General Theory of Verbal Humour has been used to analyse humour. Further, this study examines the frequency of strategies based on the type of humour. Zabalbeasoa's classification of humour has been used in this study to categorise humour. Both qualitative and quantitative approaches were followed in this study. Gottlieb's classification of subtitling strategies was used to identify the strategies used by the subtitler. Findings revealed that subtitling strategies must be employed based on the analysis of each humorous instance and its nature, rather than transferring the content of the source language to the target language.

Keywords: *Audio-Visual Translation, Gottlieb's Classification, Humour, Fansubbing, Subtitling Strategies*

**Corresponding author: Tel.: +94 (70) 498 7427; Email: iruma@ssl.sab.ac.lk;
<https://orcid.org/0009-0003-4972-5125>*

Introduction

Dealing with humour can be considered one of the most challenging tasks a translator encounters. Humour is deeply rooted in the language and culture where it is presented. Thus, to translate humour, a translator should consider the relevant linguistic and cultural factors connected to it. On the other hand, humour is sometimes confined to a specific community within a mass culture. Moreover, some categories of humour, such as wordplay are directly connected to their source language, which requires a complicated translation as languages differ syntactically, semantically, and morphologically.

Apart from the linguistic and cultural factors, subtitling humour has become more challenging as a translator also has to deal with technical and textual restrictions that limit the possible solutions. Many theorists such as Attardo (2004), Delabastita (2004), Asimakoulas (2004), Zabalbeascoa (2005), Díaz Cintas and Remael (2007), and Vandaele (2010) have discussed such challenges in subtitling humour. However, these studies have mainly focused on the translation and subtitling of humour in European languages, where minimum gaps exist compared to the English and Sinhalese language pair. Moreover, studies on fansubbing of English movies are comparably rare, particularly in Sri Lanka where there is a necessity for studies in fansubbing.

Material and Methods

Both qualitative and quantitative approaches have been used in this study. First, the qualitative approach has been used to analyse the humour, identify the types of humour in the English comedy movie *Anchorman: The Legend of Ron Burgundy*, the strategies used in subtitling humour and examine the effectiveness of each strategy. Secondly, a slightly quantitative approach has been used to indicate the frequencies of the subtitling strategies. English Subtitles that carry humour and parallel Sinhalese subtitles of the selected movie were gathered as primary data for this study using the document analysis method, and secondary data were gathered through existing literature and online sources. The corpus of the study is the English comedy movie *Anchorman: The Legend of Ron Burgundy*, directed by Adam McKay, which was telecasted in 2004. This movie is well-known for its extensive use of humour and is included in the top fifty comedy movies according to the International Movie Database (IMDb). Sinhalese subtitles were from Baiscope.lk, which is one of the leading fansubbing websites in Sri Lanka. The General Theory of Verbal Humour (GTVH) presented by Attardo and Raskin (1991) has been employed to analyse humour in each subtitle using the coding framework. Humour in each subtitle is categorized based on the types of verbal

humour presented by Zabalbeascoa's (1996) Categorisation of Humour using the content analysis method. Then the use of strategies in subtitling humour and their frequency are analysed using the subtitling strategies presented by Gottlieb (1992) using the descriptive statistical method. Further, the effectiveness of the subtitling strategies was discussed using GTVH as a metric.

Results and Discussion

Table 1:
Frequency of the Use of Subtitling Strategies

	International Jokes or Binational Jokes (16)	Jokes Referring to National Culture or Institution (03)	Complex Jokes (06)	Taboo Humour (05)	Language-dependent Jokes (01)	Jokes Restricted by Audience Profile Traits (01)	Total (32)	Percentage (%)
Transfer	12	1	1	3	-	-	17	53%
Deletion	-	-	1	1	1	-	3	9%
Imitation	-	-	-	1	-	-	1	3%
Adaptation	1	1	-	-	-	1	3	9%
Euphemism	-	-	1	-	-	-	1	3%
Multiple Strategies	1	1	2	-	-	-	4	13%
Mistranslation	2	-	1	-	-	-	3	9%
Total	16	3	6	5	1	1	32	100%

Results of the study reveal that transfer is the most often used (53%) strategy in the movie. In most instances, the subtitler could transfer the humour effect to the target language as that strategy directly translates what is included in the source language. However, the strategy of transfer does not apply to every type of humour, particularly that deals with linguistic and cultural aspects.

The second most used subtitling strategy is deletion. Further, it was identified that the subtitler's lack of awareness of the use of the deletion strategy has caused unsuccessful transfers of humour.

The other second most used strategy is imitation. In the case of humour it was

identified that the use of imitation strategy results in humourless effects in the target language when subtitling humorous instances that include names of public figures, places, food, etc.

The subtitler's effort to render the humour in the movie is evident in utilising several interventional strategies which are Adaptation, Euphemism, and Multiple Strategies through which the linguistic and cultural gap could be bridged to some extent.

Conclusion and Recommendations

Results of the study reveal that not all the ten strategies introduced by Gottlieb (1992) were employed in subtitling humour from English into Sinhalese in the movie *Anchorman: The Legend Ron Burgandy*. The subtitler has used the strategies, transfer, deletion, and imitation while the subtitler has also attempted to use interventional strategies that are Adaptation, Euphemism, and Multiple Strategies to preserve the humour effect.

Further, it was also noticed that fansubbers should focus more on the use of subtitling strategies based on the nature of the humorous utterances according to the GTVH, than only focusing on the content of the source language.

Further, it was identified that although the GTVH mainly focuses on the status of the sameness between a source language and target language humour, ignoring the transferring of the humour effect, maintaining the same Knowledge Resources as the source language is not effective due to the linguistic and cultural restrictions.

References

- Asimakoulas, D. (2004). Towards a model of describing humour translation: A case study of the Greek subtitled versions of *Airplane!* and *Naked Gun*. *Meta*, 49(4), 822-842.
- Attardo, S., & Raskin, V. (1991). Script theory revis (it) ed: Joke similarity and joke representation model.
- Delabastita, D. (2004). Wordplay as a translation problem: A linguistic perspective. In H. Kittel, A. Paul Frank, N. Greiner, T. Hermans, W. Koller, J. Lambert, & F. Paul (Eds.), *Übersetzung, translation, traduction* (pp. 600–606). Mouton de Gruyter.
- Díaz-Cintas, J., & Remael, A. (2007). *Audiovisual translation: Subtitling*. St. Jerome Publishing.

Gottlieb, H. (1992). Subtitling-a new university discipline. In *Teaching translation and interpreting* (p. 161). John Benjamins.

Simanjuntak, N. N. (2013). Subtitling strategies in *Real Steel* movie. *Dian Nuswantoro University*, 1-17.

Zabalbeascoa, P. (2005). Humor and translation—an interdiscipline.

Zabalbeascoa, P. (2016). Translating jokes for dubbed television situation comedies. In *Wordplay and Translation* (pp. 235-257). Routledge.

TRACK 06
ENGLISH LANGUAGE TEACHING AND
INNOVATIVE EDUCATION PRACTICES

PLENARY SPEECH

English Language Teaching and Innovative Education Practices

Associate Prof. Prashanth Mothe

Department of English, Adarshh Senior
College
Marathawada University
Aurangabad, Maharashtra, India



The landscape of English Language Teaching (ELT) is continuously evolving, driven by advancements in technology, new pedagogical theories, and an increasing demand for innovative approaches to learning. This talk will explore the intersection of ELT and innovative education practices, with a focus on strategies that enhance engagement, foster critical thinking, and facilitate language acquisition in diverse classroom settings. Drawing on current research and successful case studies, the session will highlight innovative tools and methods such as task-based learning, flipped classrooms, gamification, and the integration of Artificial Intelligence into traditional teaching environments. As technology advances, AI has emerged as a key tool to enhance language learning, creating more dynamic, personalised, and efficient learning environments. Participants will be encouraged to reflect on how these practices can be adapted to their own contexts, emphasising the importance of student-centered learning and the need for continuous professional development. By the end of the session, attendees will have a deeper understanding of the potential for innovative practices to transform English language instruction, making it more dynamic, inclusive, and responsive to the needs of today's learners.

As educators, we are constantly exploring ways to make our teaching more effective and engaging for our students. The field of ELT is particularly dynamic, as it involves not only the development of language skills but also the creation of meaningful learning experiences that can have a lasting impact on students. In today's talk, we will examine how innovation is transforming ELT, and how we can leverage new practices and technologies to improve teaching and learning outcomes.

The Changing Landscape of ELT:

The traditional methods of teaching English have been rooted in grammar-based instruction, memorisation, and passive learning. However, over time, these approaches have proven to be less effective in preparing students for

real-world communication. English is not just about mastering grammatical structures; it's about connecting with others, thinking critically, and expressing ideas clearly. This shift in understanding is driving the evolution of ELT, where teaching methodologies are increasingly focusing on learner-centered approaches, task-based learning, and the integration of modern technologies.

Innovative Education Practices in ELT:

Let's explore some of the key innovations in ELT that have been gaining momentum in recent years:

Task-Based Learning (TBL)

Flipped Classrooms

Gamification

AI in English Language Teaching:

The importance of AI in English Language Teaching cannot be overstated. It offers personalized, efficient, and engaging learning experiences that cater to the diverse needs of students. From providing real-time feedback to creating tailored lessons, AI helps enhance language acquisition, improve speaking and pronunciation, and support learners in ways that were previously impossible. While AI is a powerful tool, it works best when combined with the essential human elements of teaching: empathy, encouragement, and guidance. As AI continues to evolve, its integration into ELT will only deepen, offering even more sophisticated ways to support and enhance language education. By embracing these technologies, we can create more dynamic, accessible, and effective learning environments that empower students to become confident and proficient English speakers.

The Most Important AI-powered Applications in English Language Teaching

AI-powered apps are revolutionising English Language Teaching (ELT) by offering personalised learning experiences, real-time feedback, and interactive tools that cater to the diverse needs of students. These apps use Artificial Intelligence (AI) to assess learners' progress, identify areas of improvement, and tailor lessons and exercises accordingly. From pronunciation and grammar correction to vocabulary acquisition and personalized learning paths, these tools provide a dynamic and flexible approach to language learning, enhancing both the teaching process and the overall learning experience. Below are some of the most effective AI apps used in ELT, with examples of how they can be integrated into the classroom:

1. Duolingo
2. Grammarly
3. ELSA Speak

4. SpeechAce
5. Busuu
6. Rosetta Stone
7. HelloTalk
8. Lingvist
9. Mindsnacks
10. QuillBot

Challenges and Considerations

While AI offers numerous advantages, integrating it into ELT also presents challenges. Teachers need to be trained in using these tools effectively, and there's a need for equitable access to technology, especially in under-resourced areas. Furthermore, ethical concerns related to data privacy, AI bias, and the potential for over-reliance on technology must also be considered.

For AI to be successfully integrated into ELT, it must complement the teacher's role, not replace it. The human element of teaching—such as empathy, motivation, and guidance—remains irreplaceable, and AI should be seen as a supportive tool that enhances rather than substitutes traditional teaching practices.

Conclusion: Embracing AI in ELT

In conclusion, the integration of AI in English Language Teaching represents a major leap forward in how we approach language learning. AI is transforming the classroom by providing personalized learning experiences, offering instant feedback, and enhancing engagement through tools like chatbots, speech recognition, and intelligent tutoring systems. By leveraging these technologies, we can create more dynamic, effective, and inclusive learning environments that cater to the diverse needs of today's learners.

However, as we embrace AI, it's essential that we maintain a balanced perspective, combining the power of technology with the invaluable human connection that makes teaching and learning meaningful. As educators, we should continue to explore, experiment, and reflect on how AI can be integrated into our classrooms to create the most impactful language learning experiences.

18 December 2024

REDUCING SPEAKING ANXIETY: A CASE STUDY ON IMPROMPTU SPEECHES AMONG FIRST-YEAR UNDERGRADUATES

H.K.P. Dineshika^{1*}

¹*Department of Commerce and Financial Management, Faculty of Commerce and
Management Studies, University of Kelaniya*

Abstract

Teaching speaking has recently become a significant focus in English Language Teaching in Sri Lanka, as schools and higher education institutions have been criticised for neglecting to prioritise speaking skills. This study aimed to investigate the effectiveness of using impromptu speeches to reduce speaking anxiety among undergraduates. 45 first-year undergraduates from the Bachelor of Science Honors in Sports Science Degree programme offered by a selected state University in Sri Lanka were taken as the sample. The quantitative data were collected through speech tests, whereas qualitative data were collected through semi-structured interviews. Quantitative data were analysed using SPSS, and qualitative data were analysed using thematic analysis. It was found that the use of impromptu speeches had a statistically significant positive impact. It is helpful for the learners to identify their weaknesses and work on them to enhance their speaking abilities. The findings of this study can be incorporated to improve the speaking activities of ESL classes in Sri Lanka.

Keywords: *ESL Class, Impromptu Speeches, Speaking Anxiety, Undergraduates*

*Corresponding author: Tel.: +94(77)2794681; Email: prdin191@kln.ac.lk;
<https://orcid0000-0002-8461-8339>

Introduction

Many ESL/EFL students experience speaking anxiety, which refers to the fear linked to real or expected interactions in English. This anxiety, stemming from limited proficiency, communication apprehension, or fear of mistakes, is common in classrooms due to students' lack of participation in speaking tasks. It hinders academic performance and persists despite early speaking skills education (Lestari, 2020). In Sri Lankan universities, particularly state universities, speaking anxiety is a serious challenge due to insufficient focus on English communication skills (Alwis, 2020). At the University of Kelaniya, students in the Bachelor of Science Honors in Sports Science (BSSS) programme struggle with English communication due to varying proficiency levels. The study aims to investigate the effectiveness of using impromptu speeches to reduce speaking anxiety among undergraduates. The research questions are: 1) How do impromptu speeches contribute to improving English speaking? 2) What are learners' opinions on using impromptu speeches to improve speaking abilities?

Material and Methods

The Teaching Speaking Cycle by Goh and Burns (2012) outlines steps for preparing impromptu speeches. Initially, learners focus on the speaking activity and prepare their content. After the activity, they identify challenging language elements and tactics taught before repeating the activity. Finally, learners reflect on their performance. This model was used in a study over 10 weeks where students in the BSSS programme at the University of Kelaniya were given random speech topics related to their field.

Results and Discussion

To answer RQ 1, quantitative data were collected through impromptu pretests, and a posttest, and analysed using SPSS. The findings indicated an increase in the mean values of the impromptu tests, as shown in Table 1.

Table 1:
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pretest	45	1	7	2.80	1.440
Impromptu_1	45	1	7	2.80	1.375
Impromptu_2	45	1	5	2.76	.883
Impromptu_3	45	1	4	3.02	.812
Impromptu_4	45	1	7	3.87	1.140
Impromptu_5	45	2	6	3.73	1.116
Impromptu_6	45	2	5	3.82	.806
Impromptu_7	45	2	8	4.36	1.209
Impromptu_8	45	2	7	4.89	1.247
Posttest	45	3	8	5.71	1.254
Valid N (listwise)	45				

If the p-value is less than 0.05, there is a statistically significant difference between groups. According to Table 2, pairs 1, 2, 3, 5, and 6 showed no statistically significant difference between groups. Pair 8 showed a marginally statistically significant difference between the seventh and eighth impromptu tests. However, statistically significant differences were found between the third and fourth impromptu tests, between the sixth and seventh impromptu tests, and between the eighth impromptu test and the posttest. Therefore, it can be concluded that, although there is an increase in the mean values of the tests, this increase is not statistically significant.

Table 2:*Paired Sample Test*

		Paired Differences			95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Pretest - Impromptu 1	-.000	2.023	.302	-.608	.608	.000	44	1.000
Pair 2	Impromptu 1 - Impromptu 2	.044	1.522	.227	-.413	.502	.196	44	.846
Pair 3	Impromptu 2 - Impromptu 3	-.267	1.156	.172	-.614	.081	-1.547	44	.129
Pair 4	Impromptu 3 - Impromptu 4	-.844	1.147	.171	-1.189	-.500	-4.938	44	.000
Pair 5	Impromptu 4 - Impromptu 5	.133	1.727	.257	-.385	.652	.518	44	.607
Pair 6	Impromptu 5 - Impromptu 6	-.089	1.362	.203	-.498	.320	-.438	44	.664
Pair 7	Impromptu 6 - Impromptu 7	-.533	1.375	.205	-.946	-.120	-2.602	44	.013
Pair 8	Impromptu 7 - Impromptu 8	-.533	1.961	.292	-1.122	.056	-1.824	44	.075
Pair 9	Impromptu 8 - Posttest	-.822	1.542	.230	-1.285	-.359	-3.578	44	.001

Furthermore, pretest and posttest marks were analysed separately to determine if there was a statistically significant difference between the scores (Table 3). The mean value of the pretest is 2.80, and that of the posttest is 5.71. The analysis found a statistically significant difference between the pretest and posttest scores, indicating a positive impact of using impromptu speeches to enhance learners' English-speaking abilities. These findings align with a previous study by Siregar (2023), which also reported a statistically significant difference between the experimental and control group mean values, concluding that the impromptu speech technique significantly enhances students' English-speaking abilities.

Table 3:*Paired Sample Test 2*

		Paired Differences			95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Pretest - Posttest	-2.911	1.579	.235	-3.385	-2.437	-12.371	44	.000

The data gathered from the semi-structured interviews were analysed thematically to find answers for RQ 2 and five main themes were found: (1) stage fear (2) lack of vocabulary (3) time constraints and idea-generating (4) grammatical structures and (5) interest and motivation.

Table 4:

Findings of Qualitative Data Analysis

Themes	Example Comments
Stage fear	<i>"I am a shy girl and I forget things when I come in front of the class. The first day I was shivering and I couldn't talk well. But.. but.. teacher asked us to come to the front every day to do a speech and that practice helped me to reduce my fear. Now I can speak in English in the class thanks to her".</i>
Lack of vocabulary	<i>"I found that I need to have more words to speak"</i> <i>"I get stuck when the teacher asks me to speak in English as I don't know many English words. But these activities helped me to search for new words and memorise them"</i>
Time constraints and idea-generating	<i>"it is difficult to gather ideas within a given time"</i> <i>"Speaking in English for the given time was difficult on the first day. But as we do more activities I could speak exceeding the time duration. I think these activities are really helpful"</i>
Grammatical structures	<i>"I forgot sentence structures but I tried to speak in the way that I can hehe kind of broken English..."</i> <i>"when I am doing these activities I didn't think about grammar. I wanted to speak somehow"</i>

Interest and
motivation

"I found these activities are stressful at the same time very interesting"

"these activities motivated me to do an extra study on vocabulary and dictation"

The qualitative data findings indicated that all participants enjoyed the impromptu speaking activities and developed their English-speaking abilities in at least one aspect. These findings align with Oli and Ramesh's (2022) findings. Moreover, Alwis (2020) found that a lack of confidence, vocabulary, and grammar knowledge tends to create speaking anxiety among tertiary-level ESL learners in Sri Lanka and recommended that conducting impromptu speeches can help these learners develop their English-speaking abilities.

Conclusion and Recommendations

In conclusion, the data analysis of the present study confirmed that using impromptu speeches positively impacts enhancing undergraduates' English-speaking abilities. It minimizes their speaking anxiety and allows them to identify and work on areas for improvement. Based on these findings, impromptu speeches can be incorporated with proper guidance as a strategy to reduce speaking anxiety among ESL learners.

However, since this investigation is limited in scope, its results should not be broadly applied. Further comprehensive research is necessary to gain a more thorough understanding of the efficacy of impromptu speeches across diverse ESL learning contexts in Sri Lanka. Nonetheless, the study suggests that educators can consider employing impromptu speeches as a method to diminish ESL learners' speaking anxiety.

References

Alwis, O. (2020). *Anxiety in speaking English among tertiary level learners of English as a second language*. Retrieved from <https://files.eric.ed.gov/fulltext/ED603429.pdf>

Goh, C., & Burns, A. (2012). *Teaching speaking: A holistic approach*. Cambridge University Press.

Lestari, D. W. (2020). *Students' perception of the causes of anxiety in speaking English at an Islamic private senior high school in Yogyakarta*.

Oli, L., & Ramesh, M. (2022). Causes of learners' English speaking anxiety:

A literature review. *International Journal of Food and Nutritional Sciences*, 11(8), 581–592.

Siregar, P. R. (2023). *The effect of impromptu speech technique to speaking ability at grade IX students of SMP N 3 Padangsimpuan* [Bachelor's thesis, UIN Syekh Ali Hasan Ahmad Addary Padangsidempuan]. Retrieved from <https://etd.uinsyahada.ac.id/9539/>

REQUIREMENT OF ADAPTING ENGLISH CURRICULA OF ENGINEERING EDUCATION TO ENHANCE ENGLISH LANGUAGE COMPETENCE IN THE WAKE OF THE POST-PANDEMIC ECONOMIC DOWNTURN

Rashmika Lekamge^{1*}, Banujan Kuhaneswaran², Jenan Rajavarathan³

¹ Sabaragamuwa University of Sri Lanka, Faculty of Geomatics, English Teaching Unit, Belihuloya, Sri Lanka

² Sabaragamuwa University of Sri Lanka, Faculty of Computing, Department of Computing and Information Systems, Belihuloya, Sri Lanka

³ Sabaragamuwa University of Sri Lanka, Faculty of Geomatics, Department of Surveying and Geodesy, Belihuloya, Sri Lanka

Abstract

English proficiency is mandatory for educated professional migrants to survive and achieve professional success internationally. The COVID-19 impact enhanced the rate of educated skilled migration for several reasons, such as falling real wages, the decline in quality of life, economic and financial uncertainties, and contraction of the economy, which led the study to identify and address emerging English language requirements in the curricula practised in Sri Lankan universities. This study explores the possible alterations that should be implemented to merge the triggered gap between the catered English language course units in the undergraduate phase and the profession-oriented language requirement that remains in the local and international industry. A multi-method approach was involved in the study as it added more clarity and validation to the findings. The findings contribute to the Engineering course designers through detailed profiling of the role of English as perceived by Sri Lankan graduate migrants.

Keywords: *Engineering Curricula; Language Requirement; Post-COVID-19 Economic Crisis; Profession Oriented; Skilled Migration Flows.*

*Corresponding author: Tel.: +94 (70) 4841489; Email: rashmi@geo.sab.ac.lk;
<https://orcid.org/0000-0002-5995-9916>

Introduction

Tertiary education in Sri Lanka remained at a quality standard with face-to-face interactive learning, with a great demand for jobs in engineering-related and construction fields, which made the Sri Lankan graduates satisfactory and secured in their professional grounds. By the end of 2020, the Sri Lankan economy was constricted by 3.6%, the poverty rate increased by 4.1%, the unemployment rate by 5.2%, and the inflation rate by 4.56% (Razeena Nimaaz Marso, 2022). Thus, the highest recorded unemployment rate was 5.5% in 2020. The Central Bank of Sri Lanka, in their annual report (2022), reported the major reasons as the collapse of formal employment, institutional closure, operations under capacity, ceasing the construction sites and development projects etc. (Razeena Nimaaz Marso, 2022). The COVID impact further enhanced the rate of migration of skilled-professionals for several reasons, such as falling real wages, the decline in quality of life, economic and financial uncertainties, and contraction of the economy. Accordingly, departure for foreign employment in 2018 from the skilled labour category was recorded as 67,053 (31.7%), and 7,210 (3.4%) in the professional category. In 2021, 92,836 (32.9%) skilled labour migrations were recorded, whereas another 40,174 (32.9%) migrations were recorded under the professional category (Ekanayake & Amirthalingam, 2021).

English language competency plays a vital role in the contemporary validity of academic and professional success (Wang & Curdt-Christiansen, 2016). With the impact of COVID-19, the importance and undeniable status quo towards the claim of English language competency among graduate migrants and professionals has become a mandatory area to investigate and a timely requirement. It is compulsory to identify and address the newly emerged English language requirements in the curricula practised in Sri Lankan universities. This will ensure that current undergraduates or future professionals graduating from these universities can succeed and overcome professional barriers.

This study focuses on exploring the possible alterations that should be implemented to merge the triggered gap between the catered English language course units in the undergraduate phase and the profession-oriented language requirement that remains in the local and international industry.

Material and Methods

A multi-method approach was involved in the study as it added more clarity and validation to the findings of the current study. Thus, the study utilised tailored questionnaire surveys for each cluster tested in the study.

Participants

The study targeted different respondent groups: (i) current undergraduates and (ii) graduates. The undergraduate cluster was distributed among all the state universities and leading semi-government universities through which the study could gather 142 usable and complete responses. From the graduate cluster, the study could obtain 123 (69 respondents willing to go abroad and 54 working in Sri Lanka) and another 95 Sri Lankan graduates living abroad.

Research Instruments

The study utilised questionnaire surveys for data collection. Each questionnaire comprised Likert scale ratings as well as open-ended questions to collect qualitative and quantitative data. Questionnaires were designed with the needs analysis conducted according to the pilot study and literature review. A pilot study was conducted with 20 respondents from each group.

Results and Discussion

A. The impact of the post-COVID-19 economic crisis on the triggered phenomenon of massive-scale educated professionals' outflow.

The responses of the graduate cluster of the sample clearly depict that nearly 60% have been harshly shaken due to the collapse of the job market. The study implies that nearly 72% of the graduate cluster has rated inflation as a factor for them to migrate. Well-established healthcare services, medication facilities, quality education, and availability of imported products in Sri Lanka were diminished after the COVID-19 pandemic (Jayasekera et al., 2023). Thus, it is revealed that nearly 80% of the graduate professionals have left the country as they wanted to seek a better quality of life. According to the collected data, nearly 70% have rated currency devaluation as a significant impact factor for their decision to move from Sri Lanka. Harsh and continuous downturns in stock market prices, drastic downward move of interest rates, and fall of in-home prices (Amaratunge et al., 2021) are dominant indicators of the economic instability of Sri Lanka. Numerically, more than 80% of the graduates have left the country due to an unstable economic situation that emerged and continued in Sri Lanka. However, due to the government's imposing of travel restrictions along with new-normal health regulations, the owners of small businesses had no other option other than liquidation. Thus, 58% of the sample has stated that loss of business opportunities has caused a significant impact on their decision to migrate. When considering all the facts revealed by the tested sample, almost all the reasons revealed by the tested criteria are related to the economic crisis of the country. Thus, it is possible to

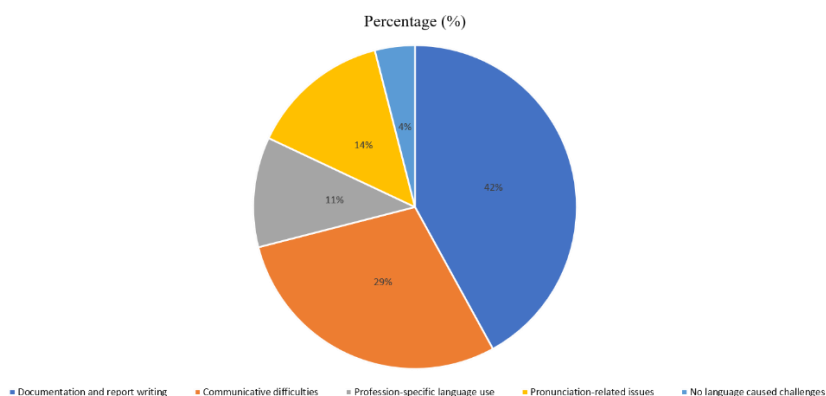
determine that the economic crisis triggered by the COVID-19 pandemic caused a phenomenon of skilled professional's outflow.

B. Language-Related Challenges Encountered in the Local Professional Grounds by Skilled Professionals

According to the collected data, the study revealed that graduate professionals who are engaged in the local industry also face English language-related challenges when engaging in their professional activities. Under that, as displayed in Figure 1, documentation-related issues (42%), communicative difficulties (29%), profession-specific language issues (11%), pronunciation issues (14%), and zero language-related issues (4%) were discovered.

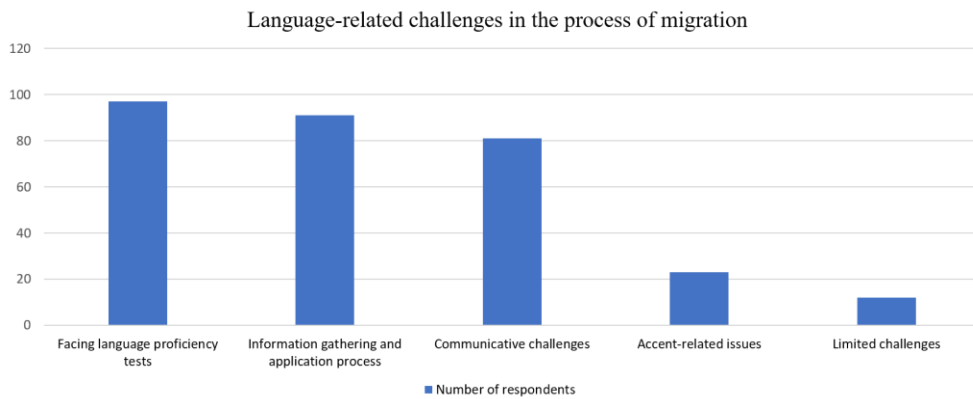
Figure 1:

Language-related Challenges Encountered in the Local Professional Grounds by Skilled-Professionals



C. Language-Related Challenges Experienced in the Process Of Migration

Another significant avenue discovered through the study is the language-related obstacles encountered in preparation for migration and during migration. According to the responses of the tested cluster, the research identified important concerns that need to be discussed in advance. Among those, facing language proficiency tests (97%), information gathering and application process (91%), communicative challenges (81%), accent-related challenges (23%), and limited or no language-caused challenges (12%) are the prominent concerns.

Figure 2:*Language-Related Challenges Encountered in the Process of Migration*

D. Language-Related Challenges Encountered in Foreign Grounds

The third cluster studied in the current study was the already migrated skilled-professionals. Among them, the most highlighted concerns were challenges related to a diverse range of accents in English (73%), communicative difficulties (87%), response and comprehension speed (47%), language anxiety and personal dilemmas (67%).

Figure 3:*Language-Related Challenges Encountered in the Foreign Grounds*

Conclusion and Recommendation

The currently practising English language course contents were designed based on the pre-COVID-19 requirements of the professional grounds. However, the triggered trend after the economic crisis in Sri Lanka, which led to higher rates of skilled-professional migrations, has caused the need to adapt the existing course modules according to the demand of international professional grounds. Further, the study identified that the contents of current English courses have a considerable contribution to the fulfilment of the professional requirements on international grounds, yet the lacuna remains in addressing the areas required in the pre-migration procedure. Accordingly, areas like internationally accepted English language test preparation and visa process-related documentation are mandatory areas that need more consideration in the currently practised curricula. Initially, engineering education in Sri Lanka and all the other ESL and EFL learning environments will benefit by uplifting their course contents with highlighted areas like formal writing skills, workplace communication skills, technical compatibility, and effective presentation skills that would enhance the scope of employability, migration, and post-graduate opportunities in foreign grounds. These insights are deployable for higher education institutes when designing their ESP courses. Further, paying attention to the local needs and prevailing trends in professional arenas and designing learning objectives accordingly will be vital for curriculum developers because the commonly used, general course contents are not fully accommodatable to the post-COVID-19 educational demands when crafting a well-poised professional needed for the international community.

References

- Amaratunge, V. I., Ajward, A. R., & Rathnayake, R. M. A. K. (2021). An empirical study on the impact of political shocks and other macroeconomic variables on GDP of Sri Lanka. In S. Dhiman & R. Samaratunge (Eds.), *New Horizons in Management, Leadership and Sustainability* (pp. 293–307). Springer International Publishing. https://doi.org/10.1007/978-3-030-62171-1_14
- Ekanayake, A. P., & Amirthalingam, K. (2021). An empirical study of the factors that motivate Sri Lankan professionals to migrate to Qatar. *Migration and Development*, 10(3), 403–420. <https://doi.org/10.1080/21632324.2019.1665923>
- Jayasekera, M. M. P. T., De Silva, N. L., Edirisinghe, E. M. D. T.,

Samarawickrama, T., Sirimanna, S. W. D. R. C., Govindapala, B. G. D. S., Senanayake, G., Wickramaratne, D. L. N., Hettigoda, K., Gunawaradana, U. D. I. B., Wijayananda, K. D. P. B., & Wijesinghe, R. A. N. K. (2023). A prospective cohort study on post-COVID syndrome from a tertiary care centre in Sri Lanka. *Scientific Reports*, 13(1), 15569. <https://doi.org/10.1038/s41598-023-42350-4>

Marso, A. R. F. R. N. (2022). Effects of third wave of COVID-19 in Sri Lanka: Response on unemployment and economic cost. *Journal of Human Resource and Sustainability Studies*, 10(3), 449–463. <https://doi.org/10.4236/jhrss.2022.103027>

Wang, W., & Curdt-Christiansen, X. L. (2016). Teaching Chinese to international students in China: Political rhetoric and ground realities. *The Asia-Pacific Education Researcher*, 25(5–6), 723–734. <https://doi.org/10.1007/s40299-016-0316-z>

UNDERSTANDING THE MOTIVATORS AND BARRIERS TO RESEARCH ENGAGEMENT AMONG ENGLISH LANGUAGE TEACHERS OF SELECTED UNIVERSITIES

H.S. Jayasinghe^{1*}, M. Hapugoda²

¹University of Colombo School of Computing

² Sabaragamuwa University of Sri Lanka

Abstract

This study investigates the factors influencing research engagement among English language teachers at four state universities in Sri Lanka. Recognising the crucial role of research in improving teaching practices and educational outcomes, the research aims to understand educators' perceptions and challenges. A mixed-methods approach was used, combining in-depth interviews and structured questionnaires to gather data. The findings highlight three main themes: Motivation for Professional Advancement, Institutional Support and Encouragement, and Personal Interest and Academic Growth. Key motivators include career progression, problem-solving, and the quest for knowledge. Barriers such as time constraints, lack of resources, and inadequate mentorship were also noted. Experiences with institutional support varied, from active encouragement to insufficient guidance. Personal interest and the desire for academic growth were strong drivers, though early negative experiences could hinder long-term research involvement. The study underscores the need for enhanced institutional support, including dedicated research time, better resources, and comprehensive mentorship, to boost research engagement and contribute to professional development and educational advancement.

Keywords: *Motivators and Barriers, Research Engagement, Perceptions, Professional Development, University Teachers*

*Corresponding author: Tel.: +94 (71) 492 3922; Email: sasajaya93@gmail.com

Introduction

Research engagement among educators, particularly in the field of English Language Teaching (ELT), is crucial for the continuous improvement of teaching practices and educational outcomes. However, various factors can influence teachers' willingness and ability to engage in research activities. This study aims to explore English language teachers' perceptions towards research and to understand how these perceptions affect their research engagement. Hence the research will examine the institutional factors that may also influence research engagement. By examining the experiences and challenges faced by these educators, the research seeks to identify key barriers and potential enablers that can enhance research participation. This investigation is particularly relevant in the context of state universities in Sri Lanka, where educational resources and institutional support vary widely.

Material and Methods

To achieve a comprehensive understanding of the perceptions and challenges faced by English language teachers, this study employed a mixed-methods approach, combining qualitative and quantitative data collection techniques aligned according to the snowball sampling method.

Qualitative Component: In-depth interviews were conducted with 10 English language educators. These interviews were semi-structured, allowing for flexibility in exploring various themes and sub-themes related to research engagement.

Quantitative Component: Structured questionnaires were distributed to a broader audience of teachers and 82 responses were received. The interview data were thematically analysed to identify recurring themes and sub-themes, and the questionnaire responses were statistically analysed to quantify the prevalence and intensity of these themes across the sample population.

Results and Discussion

The study reveals several critical factors affecting teachers' research engagement, categorised into three primary sub-themes: Motivation for Professional Advancement, Institutional Support and Encouragement, and Personal Interest and Academic Growth.

i) Motivation for Professional Advancement

The sub-theme "Motivation for Professional Advancement" captures a diverse range of thoughts towards research. Participants highlighted the pragmatic need for publications for career progression, problem-solving through research to

address teaching challenges, intrinsic motivations like a quest for knowledge, and the influence of peers and professional aspirations. Research is also seen as extending beyond academic boundaries into practical applications, such as enhancing professional qualifications in specific fields. The importance of research in academia, particularly for those teaching in universities, was emphasised as vital for maintaining relevance and effectiveness.

One participant noted, "Actually, I need more publications when it comes to applying for higher positions. It is a consideration. I think it gives me more information regarding the field that I'm working on." Another added, "My main motivation is actually the quest for knowledge, and I am motivated to research because just like the practice of teaching, I enjoy finding more knowledge. It's actually a very healthy academic practice." However, Dornyei and Ushioda (2011) suggest that motivation encompasses more than just the initial reason for engaging in an action; it also includes the duration and persistence of that motivation.

These insights underscore that engagement in research is depicted as both a requirement and a passion, underlined by a positive attitude that views it as essential for professional development and advancement.

ii) Institutional Support and Encouragement

The sub-theme "Institutional Support and Encouragement" illustrates a range of experiences regarding research opportunities and support. Many participants expressed that their institutions actively encourage and facilitate research by organising workshops, offering time away from teaching, and providing necessary resources like library and online facilities. However, experiences varied significantly; some researchers reported a lack of guidance and motivation, particularly after negative initial experiences or during transitions from student to faculty roles.

For instance, one participant shared, "Of course, our institution and the senior management always encourage us to do extra research work and they actually motivate us to write research papers for the conferences." Conversely, another recounted, "Even though we were taught about research methodology like theoretical aspects when we actually started doing it, I was not guided properly. And that is a horrible experience." According to Berry (2007) and Chauvet (2009), an effective teacher is competent with a broad area of knowledge and also can spread that knowledge in their work. However, their unawareness and inadequate knowledge of research practice are negative points to their effectiveness (Koster et al., 2005).

These varying experiences highlight that while there is a general trend of encouragement for research, the depth and effectiveness of institutional support appear to vary, impacting the research activity and professional development of academic staff.

iii) Personal Interest and Academic Growth

The sub-theme "Personal Interest and Academic Growth" illustrates how individual motivations and personal interests significantly shape research engagement among academics. The narrative reveals a mix of intrinsic and extrinsic motivations. One educator emphasised, "My main motivation is actually the quest for knowledge, and I am motivated to research because I enjoy finding more knowledge." This sentiment underscores the idea that personal curiosity and a desire for intellectual growth are potent motivators for engaging in academic research, transcending mere external rewards.

However, sustaining research momentum can be challenging, especially when initial experiences are negative. As one lecturer noted, "When I was an undergraduate, I didn't have any good experience in terms of doing research back then. I think that was kind of a trauma. So, I think that is what makes me hesitate to do research."

Additionally, educators discussed various approaches to staying informed and contributing to their fields, from engaging with literature in preparation for conferences to regular discussions with colleagues and integrating new findings into teaching practices. This diverse engagement reflects a broader commitment to personal growth and academic excellence.

Conclusion and Recommendations

The study underscores the need for enhanced institutional support to address the identified barriers to research engagement among English language teachers. Providing dedicated research time, comprehensive access to research resources, and adequate mentorship and guidance can significantly strengthen research participation. Institutions should strive to create a more supportive environment that encourages both the intrinsic and extrinsic motivations of educators. Furthermore, structured research training programmes and continuous professional development opportunities can help mitigate the impact of negative early experiences and sustain long-term research engagement. Moreover, giving priority to teacher autonomy in research involvement, peer cooperation, and outside funding sources is recognised as crucial, especially in the Sri Lankan setting.

References

Berry, A. (2007). Reconceptualizing teacher educator knowledge as tensions: Exploring the tension between valuing and reconstructing experience. *Studying Teacher Education*, 3(2), 117–134. Retrieved June 17, 2021, from <https://www.tandfonline.com/doi/full/10.1080/17425960701656510>

Borg, S. (2010). Language teacher research engagement. Retrieved December 2, 2020, from <https://www.cambridge.org/core/journals/language-teaching/article/abs/language-teacher-research-engagement/61B05AC541F3F45B5C8C5C46FF9FF307>

Borg, S., & Alshumaimeri, Y. (2012). University teacher educators' research engagement: Perspectives from Saudi Arabia. *Teaching and Teacher Education*, 28(3), 347–356. Retrieved December 2, 2020, from <https://www.sciencedirect.com/science/article/abs/pii/S0742051X11001338?via%3Dihub>

Chauvot, J. B. (2009). Grounding practice in scholarship, grounding scholarship in practice: Knowledge of a mathematics teacher educator–researcher. *Teaching and Teacher Education*, 25(2), 357–370. Retrieved June 11, 2021, from https://scholar.google.com/citations?view_op=view_citation&hl=en&user=D2I6F5IAAAAJ&citation_for_view=D2I6F5IAAAAJ:2osOgNQ5qMEC

Dornyei, Z., & Ushioda, E. (2011). *Teaching and researching motivation* (2nd ed.). Harlow, England: Pearson.

Gunawardana, A., & Karunaratha, B. (2017). Teacher research: Remedy for failures in English language teaching in Sri Lanka. *International Symposium of Sabaragamuwa University of Sri Lanka*. Retrieved July 8, 2021, from https://www.researchgate.net/publication/318901986_Teacher_Research_Remedies_for_Failures_in_English_Language_Teaching_in_Sri_Lanka

Hargreaves, D. H. (1999). The knowledge-creating school. *British Journal of Educational Studies*. Retrieved July 8, 2021, from <https://doi.org/10.1111/1467-8527.00107>

Hemsley-Brown, J., & Sharp, C. (2003). The use of research to improve professional practice: A systematic review of the literature. *Oxford Review of Education*, 29(4), 449–471. <https://doi.org/10.1080/0305498032000153025>

Koster, B., Brekelmans, M., Korthagen, F., & Wubbels, T. (2005). Quality requirements for teacher educators. *Teaching and Teacher Education*, 21(2),

157–176. Retrieved July 8, 2021, from
<https://www.sciencedirect.com/science/article/abs/pii/S0742051X04001271?via%3Dihub>

A FEASIBILITY STUDY ON THE IMPLEMENTATION OF HYBRID LEARNING IN A GOVERNMENT UNIVERSITY IN SRI LANKA

H.I. Psremathilake^{1*}, W.M.R.S.K. Wanninayake², Rev. O. Chandasiri³

^{1, 2, 3} *Department of Languages, Faculty of Social Sciences and Humanities, Rajarata University of Sri Lanka*

Abstract

Blended learning (hybrid learning) is where multiple delivery modes optimise learning outcomes. This study focuses on whether implementing the hybrid learning approach in the Faculty of Social Sciences and Humanities of the Rajarata University of Sri Lanka will improve its academic performance. Hence, the primary objective of this study was to determine whether a blended learning model could be implemented in the Faculty of Social Sciences and Humanities. This study represents a transformative step toward aligning with global educational trends and addresses more engaging and interactive educational backgrounds with prevailing infrastructure facilities in the faculty. This paper emphasises that implementing an effective blended learning mode for all four batches of undergraduates, not entirely physical or online, is crucial while increasing the potential of digital literacy and faculty assets.

Keywords: *Blended Learning, Feasibility Study, Flexible Learning Modes, Government University in Sri Lanka, Hybrid Learning*

*Corresponding author: Tel.: +94 (77) 906 6224; Email: hasip@ssh.rjt.ac.lk;
<https://orcid.org/0000-0001-9489-1630>

Introduction

With the COVID-19 outbreak, the education institutes had to shift the teaching-learning process from the physical classroom to the online classroom. The pandemic undeniably accelerated the transition process to complete online instruction and provided opportunities to carry out effective online teaching. Since then, a new concept of learning has arisen; blended/hybrid learning, becoming a popular teaching-learning method in the global education sector. A hybrid approach is more effective than completely carrying out academics in traditional classrooms. The premise that learning is a continuous process is the foundation of blended learning.

As Characteristics of Blended Learning, the most common characteristics cited by Hanson Smith (1999) are as follows.

- Learners have opportunities to interact socially and negotiate meaning
- Learners have enough time and feedback
- Learners are guided to attend mindfully to the learning process
- Learners work in an atmosphere with an ideal stress/anxiety level

Though much research has been done on this area, the present study has been conducted on implementing Hybrid Learning for the Faculty of Social Sciences and Humanities at the Rajarata University of Sri Lanka. Because of that, this study focuses on finding out whether implementing the hybrid learning approach in the Faculty of Social Sciences and Humanities of the Rajarata University of Sri Lanka will effectively improve the academic performance of its staff and students. The primary rationale for conducting this study based on the Faculty of Social Sciences and Humanities of the Rajarata University of Sri Lanka was that four batches of students of the faculty study simultaneously in one academic year, but due to a lack of infrastructure facilities, one batch of students has to complete their academic year entirely through the online mode whereas the three remaining batches of students study completely in physical mode. Therefore, the faculty must identify a more effective mode of study to provide adequate and equitable education for all students. Hence, the present study focuses on identifying the benefits and challenges of blended learning, exploring whether the combination of the strengths of both traditional and online learning methods provides undergraduates with a more engaging learning experience, investigating whether the blended learning approach improves students' motivation, understanding students' attitudes towards blended learning, understanding which elements of the blended learning design, in addition to learner attributes, affect student satisfaction, learning outcomes, and knowledge construction, and understanding enticers and barriers to blended learning.

Material and Methods

Four hundred male and female undergraduates in the first year, second year, third year, and fourth year following BA and BA Honours degree programmes were selected from the Faculty of Social Sciences and Humanities, Rajarata University of Sri Lanka. The volunteer sampling method was adapted to collect data from undergraduates. Data was analysed using the thematic analysis method. The methodology adopted in this study was a qualitative case study. The structure of the questionnaire was divided into three sections, and each section was composed of ten questions: Section 1: Undergraduates who prefer to continue physical classroom learning'; Section 2: Undergraduates who prefer to continue online learning'; and Section 3: Undergraduates who prefer blended learning.'

Results and Discussion

The major themes identified through this study were infrastructure readiness, student accessibility and engagement, technical skills, and socio-economic disparities.

The university possesses a central Learning Management System (LMS) and some e-learning resources. However, bandwidth and server capacity must be improved to support increased online activities requiring substantial upgrades.

Reliable internet access remains a challenge for a significant proportion of students, especially those from rural areas, highlighting a digital divide that poses a barrier to equitable participation in hybrid learning and affordable, reliable internet access among students from economically disadvantaged backgrounds. Students generally show a positive attitude towards hybrid learning due to its flexibility. However, maintaining engagement in an online environment remains a concern, emphasising the need for interactive and engaging digital content. A significant concern is the absence of face-to-face interaction with peers and lecturers in online learning environments. Evidence suggests that some students need the structure and accountability provided by traditional classroom settings to maintain consistent self-motivation and engagement.

Students exhibit varying levels of technical proficiency. While some are adept at using digital tools, many require additional training in online pedagogy and hybrid teaching technologies. Further, the study highlights the risk of exacerbating socio-economic disparities if hybrid learning is implemented without addressing the needs of economically disadvantaged students. Providing financial aid and necessary resources for these students ensures equitable access.

Conclusion and Recommendations

In conclusion, implementing hybrid learning at the Faculty of Social Sciences and Humanities at the Rajarata University of Sri Lanka is both feasible and beneficial. It aligns with global educational trends and addresses the need for flexible, inclusive, and innovative learning environments. With strategic planning, adequate resources, and continuous evaluation, hybrid learning can significantly enhance the quality of education within the faculty. The finding revealed that most students, specifically 78.86%, exhibit high readiness toward blended learning mode. Furthermore, considering the effectiveness of blended learning from student perspectives, it is recommended to implement an adequate and equitable blended learning mode for all four batches of undergraduates, not entirely physical or online, while increasing the potential of technological infrastructure facilities and lecturer involvement.

References

- Egbert, J., & Hanson-Smith, E. (1999). *CALL environments: Research, practice, and critical issues*. Alexandria, VA: Teachers of English to Speakers of Other Languages.
- Elsissy, A. L. Y. (2013). Effect of hybrid learning on student's satisfaction in faculty of physical education. *Ovidius University Annals, Series Physical Education & Sport/Science, Movement & Health*, 13, 396–403.
- Goertler, S., Bollen, M., & Gaff Jr, J. (2012). Students' readiness for and attitudes toward hybrid FL instruction. *Calico Journal*, 29(2), 297–320.
- Graham, C. R. (2006). Blended learning systems. In *The handbook of blended learning: Global perspectives, local designs* (pp. 3–21).
- Selvaras, J. (2021). Flipping law in open and distance learning: The Sri Lankan experience. *Asian Association of Open Universities Journal*, 16(2), 211–225.
- Singh, J., Steele, K., & Singh, L. (2021). Combining the best of online and face-to-face learning: Hybrid and blended learning approach for COVID-19, post vaccine, & post-pandemic world. *Journal of Educational Technology Systems*, 50(2), 140–171.

PERCEPTIONS OF ESL LEARNERS ON, AND THEIR MOTIVATION TO, ALTERNATIVE ASSESSMENTS: A STUDY FROM A SRI LANKAN UNIVERSITY

E.C. Gunawardena^{1*}, C. Jayathilake²

¹University of Sri Jayewardenepura, Sri Lanka

² University of Sri Jayewardenepura, Sri Lanka

Abstract

Alternative Assessments (AAs) are gradually increasing because of the expansion of online mode of education since 2020. Nevertheless, AAs are under-researched, especially in terms of learner motivation in higher educational contexts. Hence, the aim of this study is to explore learner perceptions about the factors that motivate students to do AAs that are currently used in their ESL curriculum. The results confirm that motivational levels are high when students in higher education engage in AAs. Six themes, namely, choice, enjoyment, confidence, relevance, feedback and a sense of accomplishment emerged as motivating factors for AAs in the ESL curriculum. However, the absence of assessment structures or breakdown, grading rubrics or marking criteria and clear assessment instructions could lead to stress and confusion which can demotivate students to undertake AAs. The overall findings of this study include recommendations for the current use of AAs in the ESL curriculum in order to increase student motivation.

Keywords: *Alternative Assessments, English as a Second Language Curriculum, Higher Education, Learner Perceptions, Sri Lankan University, Student Motivation*

*Corresponding author: Tel.: +94 (76) 251 2710; Email: ecg1616@gmail.com;
<https://orcid.org/0009-0005-8663-303X>

Introduction

Boston (2002) specifies that “alternative assessment is a way of measuring performance through a variety of open-ended, creative, or communicative means” (p. 112). In this study, the definition proposed by Boston (2002) on AAs is employed. The term “in-semester assessments” accurately define AAs as, it is how the ESL course outline in Sri Lankan universities recognises AAs. It is included in the ESL course outline that 40% of the final grade is allocated for in-semester assessments or AAs. However, there is no mention of the types of assessments used, assessment structures, marking criteria or a grading rubric although the ESL course outline has allocated 40% of the final grade for AAs. As a result, both teachers and students get easily confused on how AAs can be used. Contrary to popular belief about the array of benefits AAs provide and theories on constructivism, the findings of this study revealed that AAs can also demotivate students if they are not properly utilized. An in-depth exploration of ESL learner perceptions will not only help understand the relationship between AAs and the motivating factors but will most likely contribute towards improving the use of AAs to increase motivational levels of the students.

Material and Methods

As AAs are of personal interest and motivational theories are complex, it is difficult to get an accurate picture of the factors which motivate students to do them. Therefore, the research methodology was carefully designed using both quantitative and qualitative research methods. In this study, a convenience sample of 50 undergraduates, from 03 ESL classrooms of a state university in Sri Lanka were selected as they are already exposed to different types of AAs. Out of the 50 participants, 43 were female and 07 were male. They were all between the ages of 19 to 23. The questionnaire consists of 15 questions with a 4-point Likert Scale concerning classroom assessment practices and student motivation. The questionnaire was developed by adapting Black & William’s (1998) constructs related to classroom assessment, and Dörnyei’s (2008) questionnaires on the effects of motivational strategies. In conducting interviews, a semi-structured interview with open-ended questions was used to find out how AAs which are used in their classroom impact their motivation. To analyse the data, the method of thematic content analysis was used. Through the interviews, six themes emerged. For the analysis of the questionnaires, the IBM SPSS Software was used and the assistance from a statistician was obtained. The use of drawings is considered a reliable and a valid research tool to gain insight into perceptions of learners (Millonig et al, 2017). The drawings collected for this study were analysed using the Visual Grammar Theory. The general results from the 50 questionnaires were analysed quantitatively whilst

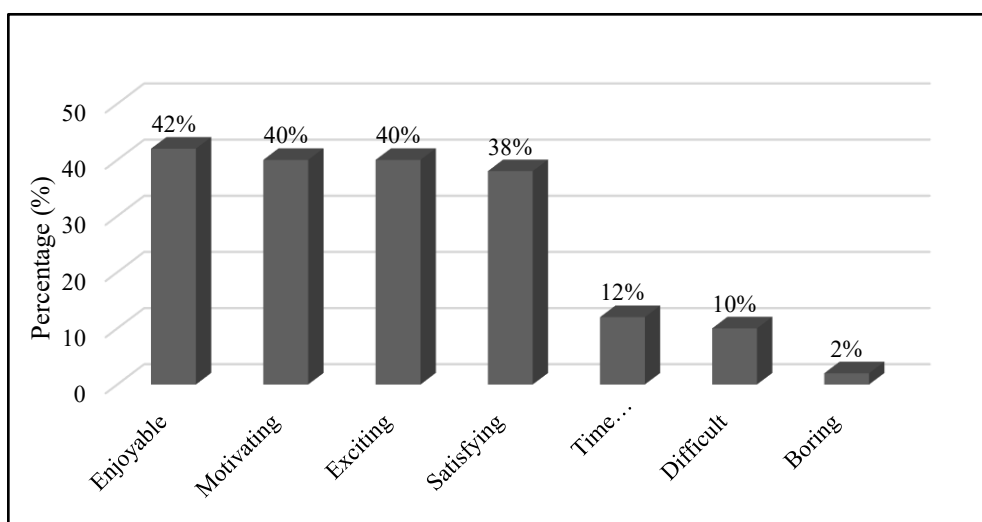
the 08 interviews and drawings were analysed qualitatively. Information from the questionnaire, interviews, and drawings were combined to obtain a complete picture of the data. Using strategies of triangulation, the coded data was used to find the patterns and links between different categories, concepts and/or themes. To represent data collected from questionnaires, drawings and interviews tables, charts and graphs were used.

Results and Discussion

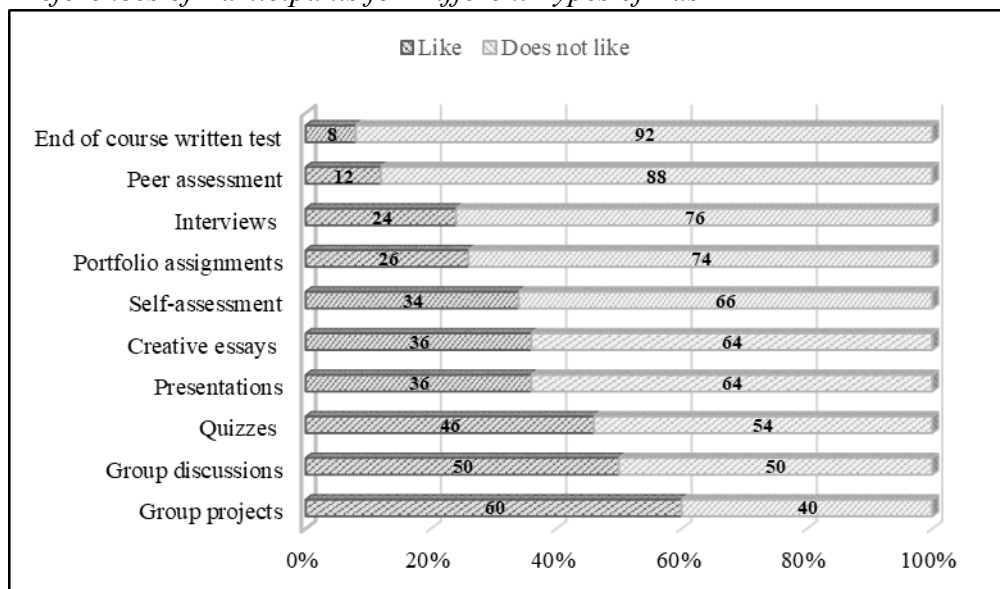
The findings confirm majority of the participants find AAs enjoyable and motivating (See figure 1).

Figure 1

Overall Learner Perceptions on AAs



The findings also revealed that two assessment types are used in the current ESL curriculum: oral presentations and portfolios. Apart from these two assessments, group assessments and speaking activities are used. As seen in figure 2, majority of the students do not like end-semester examinations. The interviews revealed that most participants prefer to be tested on their knowledge rather than their ability to memorise. Similarly, Boston (2002) describes traditional assessments, as a mere recall of facts, which many students soon forget. Accordingly, six themes emerged as motivating factors (see table 1).

Figure 2*Preferences of Participants for Different Types of Aas***Table 1***Motivating Factors of Aas*

Theme	Strongly Agree	Agree	Disagree	Strongly Disagree
Choice	70.00	28.00	2.00	0.00
Enjoyment	72.00	26.00	2.00	0.00
Confidence	56.00	42.00	2.00	0.00
Relevance	52.00	46.00	2.00	0.00
Feedback	46.00	44.00	10.00	0.00
Sense of accomplishment	54.00	44.00	2.00	0.00

On the contrary, while these perceptions during interviews and questionnaires are positive, the drawings reveal a completely different picture. As seen in figures 3 and 4, out of the 20 participants, 06 participants find AAs stressful and confusing when they are not properly used in the curriculum. As such, three demotivating factors emerged in the analysis of interviews as reasons for stress and confusion: the absence of a clear alternative assessment structure or breakdown included in the course outline, lack of assessment instructions and access to feedback.

Figure 3

Participants' Drawings on Aas



Note. These two drawings reveal that AAs can lead to stress and confusion according to the visual grammar theory.

Conclusion and Recommendations

The six motivating factors that emerged confirm the use of AAs as a powerful tool to increase levels of motivation in language learning, more specifically, in the ESL curriculum. However, the study also revealed that AAs can be stressful and cause confusion due to three main demotivating factors. To increase motivational levels in students for AAs, it is necessary to include the assessment structure or breakdown and grading rubrics in the course outline. To avoid further confusion, assessment instructions should be clear and concrete.

References

- Black, P., & William, D. (1998). Inside the black box: Raising standards through classroom assessment. *Phi Delta Kappan*, 80(2). <http://www.pdkintl.org.kappan/kbla9810.html>
- Boston, C. (2002). The concept of formative assessment. *Practical Assessment, Research and Evaluation*, 10(2). <http://pareonline.net/getnv.asp?v=8&n=9>

Dörnyei, Z. (2008). Motivating language learners: A classroom-oriented investigation of the effects of motivational strategies on student motivation. *TESOL Quarterly*, 42(1), 55–77. <https://doi.org/10.1002/j.1545-7249.2008.tb00207.x>

Millonig, D. J., Stickler, U., & Coleman, J. A. (2017). Young pupils' perceptions of their foreign language learning lessons: The innovative use of drawings as a research tool. *The Language Learning Journal*, 47(2), 229–245. <https://doi.org/10.1080/09571736.2016.1270348>

CHALLENGES FACED BY ESL TEACHERS IN TEACHING LISTENING: A STUDY BASED ON JUNIOR SECONDARY ESL TUTORS IN KELANIYA REGION

S.P. Welvidana^{1*}, Y.R. Uyangoda²

^{1, 2} *Department of English Language Teaching, University of Kelaniya*

Abstract

The purpose of this study is to investigate the challenges junior secondary English as a Second Language (ESL) tutors from Kelaniya region face when teaching listening skills. Hence, 30 private junior secondary ESL tutors were randomly selected as the sample. Data were collected by circulating an e-questionnaire. It was revealed that dominantly, the challenges were encountered by the private junior secondary ESL tutors when teaching listening, and the most effective strategies were discovered for overcoming these challenges. The findings of this study can encourage future researchers to investigate the challenges junior secondary ESL tutors encounter when teaching reading and writing.

Keywords: *ESL Teaching, Listening Skills, Junior Secondary Education, Tuition, Strategies*

*Corresponding author: Tel.: +94 (76) 577 0229; Email: ruvinathuyangoda@gmail.com;
<https://orcid.org/0000-0001-7111-2233>

Introduction

Language plays a dominant role in every individual's life. Hence, as a major skill, it has been given much attention and when it is analysed, four sub skills can be identified, namely listening, speaking, reading, and writing. When focusing on listening, Brownell (2002) states that it is “the process of receiving, constructing meaning form and responding to spoken and /or nonverbal messages” (p.7). Therefore, as a sub-skill, listening has a crucial position in English, the same factors are emphasised in order to focus on teaching ESL. Unfortunately, in Sri Lanka, reading and writing are only evaluated in term tests whereas listening is neglected and assistance is needed to develop it (Gunarathne et al., 2021). In addition, in junior secondary education which is provided from grade 06 to 09 (National Curriculum Framework for Secondary Education in Sri Lanka, 2020), the same issue can be identified and private tuition also attempts to guide them. Yet, the question still remains as challenges exist when teaching listening. Thus, this research study was undertaken with the objective of investigating challenges faced by junior secondary ESL tutors in teaching listening in the Kelaniya region, Western Province, Sri Lanka.

1. What are the challenges encountered by junior secondary ESL tutors in the Kelaniya region when teaching listening?
2. What are the most effective strategies for overcoming those challenges according to these tutors?

Material and Methods

Employing random sampling, 30 private junior secondary ESL tutors were selected and the relevant data were collected circulating a semi-structured e-questionnaire which contains open-ended and closed-ended questions. Hence, thematic analysis is used to represent qualitative data whereas descriptive analysis is employed to demonstrate quantitative data.

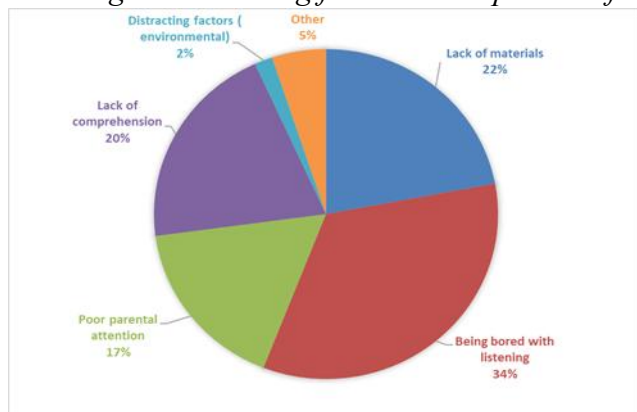
Results and Discussion

The analysed data reveal the challenges which junior secondary ESL tutors encounter when teaching listening as an answer to the closed-ended question: “What are the challenges you encounter when teaching listening to your students?” Therefore, it is evident that “being bored with listening” has received 34% of the responses representing it as the most common issue among junior secondary ESL tutors in the Kelaniya region when teaching listening. Secondly, lack of materials is another challenge which has received 22%. Thirdly, lack of comprehension is 20% whereas poor parental attention represents 17%. However, distracting factors (environmental) and others can

be identified as the least challenging issues as they have achieved 2% and 5% (see figure 1).

Figure 1

Challenges in Listening from the Perspective of Teachers



Secondary ESL tutors employ numerous effective strategies which include the use of digital resources such as YouTube, Randall's ESL Cyber Listening Lab, YouGlish, and News in Levels. Thus, they offer various listening materials tailored to learners' interests and proficiency levels. Incorporating visual aids such as transcripts and images enhances comprehension and reinforces vocabulary through multisensory learning.

In order to overcome boredom with listening activities, multimedia is used effectively, and it creates a combination of video, audio, text, and graphics. Hence, learners' attention can be captured while ensuring active engagement.

When focusing on poor parental attention, they suggested the importance of parental involvement. A case in point is implementing parent-teacher meetings and workshops which educate parents to actively engage in their child's education and support their learning journey at home. These strategies aim to bridge the gap between home and school, cultivate a supportive environment for learning, and enhance the overall educational experience for students.

To eliminate the lack of comprehension, ESL tutors implement several strategies. Repeating instructions ensures clarity and reinforces understanding throughout the listening activity. Continuation activities such as follow-up questions and summarisation tasks help maintain engagement and build upon the content presented. Additionally, implementing interactive listening discussions encourages active participation and deeper engagement with the material, promoting continuous learning and skill development. These strategies collectively aim at promoting attention, fostering meaningful

engagement, and enhancing overall listening proficiency.

To mitigate distracting factors, strategies such as noise management, and self-regulation are employed. Managing noise helps to minimise auditory distractions, while encouraging self-regulation empowers learners to maintain focus amidst environmental challenges. Creating a comfortable environment fosters concentration and engagement while enhancing the overall listening experience. To address other factors which affect listening skills negatively, several strategies are employed. Firstly, implementation of collaborative learning approaches encourages peer interaction and shared problem-solving, fostering a supportive environment for listening practice and skill development. Cultural motivation techniques such as incorporating culturally relevant content and diverse perspectives into listening materials enhance learner engagement and relevance, promoting deeper connection and understanding. Additionally, promoting cultural sensitivity by acknowledging deeper respecting learners' diverse backgrounds and experiences creates an inclusive learning environment that encourages active participation and mutual respect (see table 1).

Table 1

The Most Effective Strategies to Overcome the Identified Challenges

Challenges	Strategies	Frequency
Lack of materials	Utilisation of digital resources Use of visual aids	13
Being bored with listening	Integration of multimedia	8
Poor parental attention	Increase of parental involvement Establishment of communication channels Workshops	7
Lack of comprehension	Repeating instructions Fostering interactive listening	19
Distracting factors (environmental)	Noise management Encourage self-regulation	8
Others	Collaborative learning Cultivate motivation Cultural sensitivity	9

Conclusion and Recommendations

In conclusion, challenges faced by junior secondary ESL tutors in teaching listening can be identified. Hence, the analysed data firstly reveal that being bored with listening has become the most common challenge among junior secondary ESL students. Secondly, strategies which can be used to overcome the identified challenges were also discussed. This study may encourage investigators to conduct further studies based on junior secondary ESL students including an investigation on the effectiveness of listening, examining the role of individual learner factors in listening comprehension, and exploring innovative approaches to apply listening instructions into ESL curriculum. Moreover, a study on the challenges faced by senior secondary ESL teachers when teaching listening can also be conducted.

References

- Brownell, J. (2002). *Listening: Attitudes, principles, and skills*. Routledge.
- Gunaratne, M. D., Chamalika, H. K., Fernando, S., & Jeganathan, T. B. (2021). English language teaching in Sri Lanka: Issues, concerns and remedies. *International Journal of Scientific Research Engineering Development*, 4(5), 1211–1222.
- Kasturiarachchi, C. (2019). Classroom management, learning resources, and English language skills development of Sri Lankan students: Listening activities as a method of improving language proficiency. *Galore International Journal of Applied Sciences and Humanities*, 3(3), 10–22. https://www.gijash.com/GIJASH_Vol.3_Issue.3_July2019/GIJASH002.pdf
- Ministry of Education. (2020). *National curriculum framework for secondary education in Sri Lanka*. Ministry of Education.

EFFECTS OF ENGLISH LANGUAGE TEACHER TRAINING ON TEACHING PERFORMANCE OF JAPANESE PUBLIC JUNIOR HIGH SCHOOL ENGLISH TEACHERS

E. P. B. A. Thushari ^{1*}

*¹Department of Languages, Faculty of Social Sciences and Languages,
University of Sabaragamuwa*

Abstract

This study investigates the impact of English language teacher training on the teaching performance of Japanese Public Junior High School (JHS) teachers. Using a mixed-methods approach that includes Personal Attitude Construct (PAC) Analysis, the research identifies critical themes such as immersive pedagogical enrichment, institutional support, cross-cultural exploration, and assessment strategies. Structured questionnaires and in-depth interviews with experienced teachers reveal that effective training methods and institutional backing are crucial for enhancing teaching effectiveness. Findings highlight the importance of practical, immersive training experiences and robust institutional support in improving teaching performance. The study recommends expanding training programmes to incorporate more hands-on learning and effective assessment techniques to better meet the evolving educational needs in Japan.

Keywords: *Teacher Training, Pedagogical Enrichment, Cross-Cultural Exploration, Assessment Strategies, Teaching Effectiveness*

**Corresponding author: Tel.: +81 (80) 3223 2992; Email: epberni@yahoo.com*

Introduction

Japan acknowledges the global significance of English (Devrim & Bayurt, 2010) but faces challenges integrating it into its education system due to concerns about cultural identity and language preservation (Kacharu, 1997; Lo & Bianco, 2001). Japan's EF English Proficiency Index position highlights these ongoing challenges (EF EPI | EF Global Site, 2023 edition).

Practical teacher training is crucial for enhancing instructional quality and student outcomes (Fullan, 1982; Rao, 2019), yet identifying optimal training methods remains complex. This study investigates how English language teacher training impacts teaching performance among Japanese public junior high school's teachers. It aims to identify effective training components, assess their influence on teaching proficiency, and evaluate their practical application in classrooms.

Utilising a comprehensive mixed-methods approach with structured questionnaires and in-depth interviews, this study employs Personal Attitude Construct Analysis and cluster analysis (Naito, 1993, 1994, 2003; Fu et al., 2021; Mashizam et al., 2018) to thoroughly explore the relationship between training approaches and teaching effectiveness.

This study aims to enhance English language education in Japan's JHS, including different training regimens and institutional backing. It will seek to define the essential elements of effective training programmes and their impact in practice, targeting a capable teaching force that can tackle changing educational demands.

Objectives

1. To identify key components of training programmes that enhance teaching performance.
2. To investigate how the access to diverse training avenues shapes English language teaching proficiency among JHSE.
3. To assess the relevance of acquired skills in real classroom scenarios and their impact on the effectiveness of teaching.

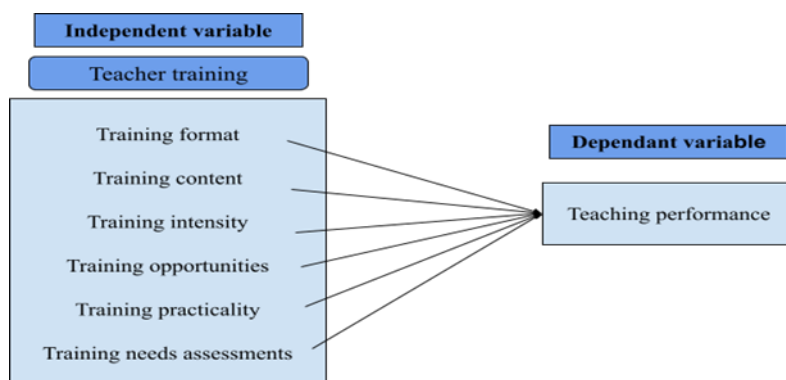
Material and Methods

This study employs an exploratory sequential mixed-methods design (Ito et al., 2011), a method chosen for its novelty and credibility according to pragmatic research principles. Structured questionnaires are administered to experienced JHS English teachers in different public schools. To investigate

how people, perceive and experience this phenomenon, the data were analysed using PAC Analysis (Naito, 1993, 1994, 2003). Quantitative cluster analysis is employed to differentiate and measure the data, supplemented with qualitative insights into the teachers' perspectives (Fu et al., 2021; Mashizam et al., 2018).

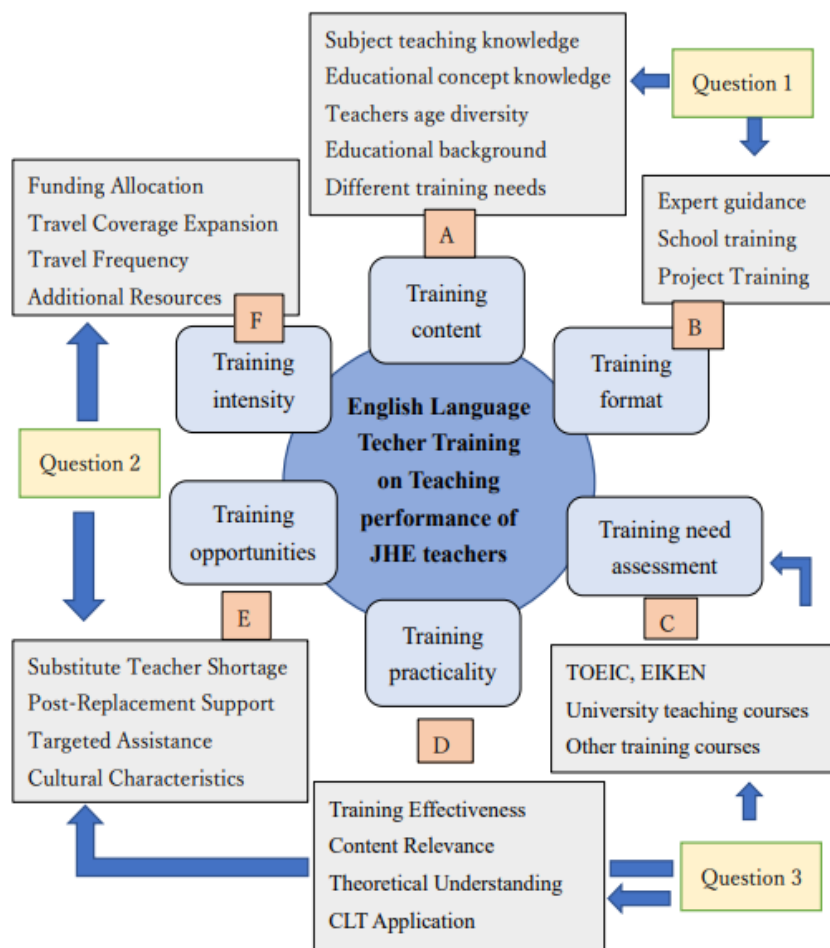
In this study, one participant was chosen, and he was given a complete briefing on the PAC analysis method. His consent was obtained for active participation. In PAC analysis, topics are prepared, responses are gathered, and similarity is calculated using the methods described in Table 1. The Ward Cluster Analysis method was chosen for its proven effectiveness (refer to Figure 5). The data are presented in Table 2 (Naito, 2015a, 2015b). This includes conducting multivariate analysis and drawing meaning from context, where the former interviews a well-experienced JHSE teacher to gather data on a given context.

Figure 1:
Conceptual Model



Note. Figure 1 shows the conceptual model illustrating teacher training as the independent variable with six dimensions, while teaching performance is considered the dependent variable (Koech & Nzulwa, 2017; Fu et al., 2021; Mashizam et al., 2018).

Figure 2:
Mapping table



Source: Figure 2 presents a mapping diagram from the literature review (Koech & Nzulwa, 2017; Fu et al., 2021; Mashizam et al., 2018), capturing the variable with relevant factors. Each oval-shaped dimension of Figure 2 signifies a specific aspect, contributing to the creation of three questions.

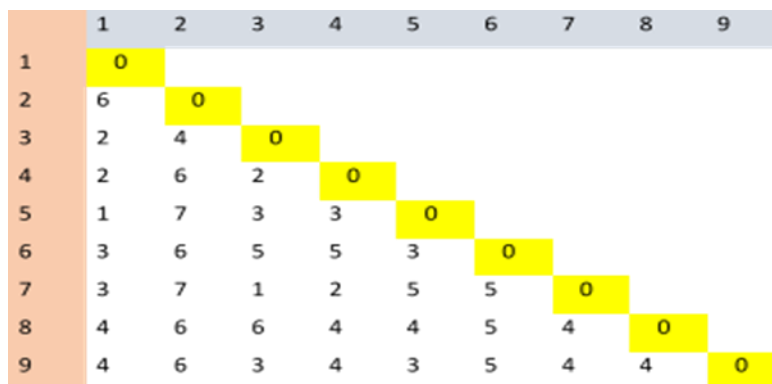
Results and Discussion

A dendrogram is constructed using the data in Table 1, employing HALIBU software to show relationships (Figure 2). After that, the participant is interviewed to discuss and analyse the dendrograms created. The next phase moves into qualitative analysis, where the meanings of the clusters are validated and adjusted based on conversations with the participant.

Table 1:*Raw data table with Key words*

Initial number	Key words	Priority order
1	Create English lessons and observe each other	1
2	Observe English lessons at several schools	3
3	Teaching practice for two weeks	5
4	Seminar held by the Board of Education	9
5	Observe other teachers' lessons at my school	7
6	Training by MEXT in the US	2
7	Lectures by National Institute of Policy Research	8
8	Brushing up on English using some tools	6
9	Review after observation classes	4

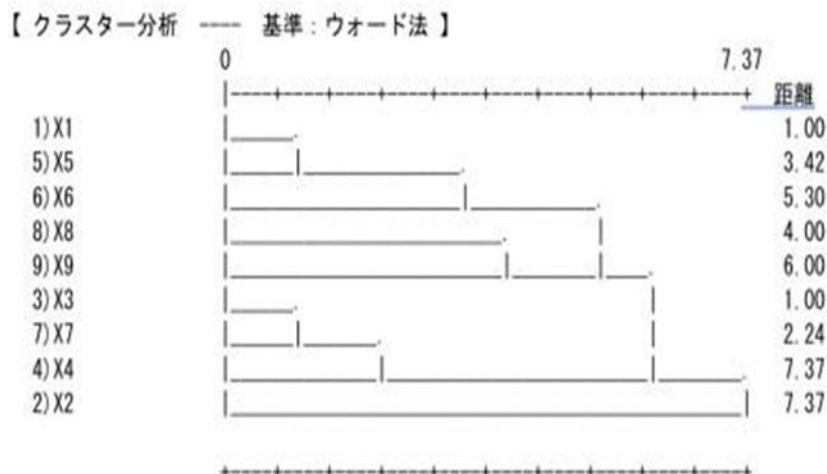
Note. These associated keywords were provided by the informant based on a face-to-face interview and later prioritized by assigning numbers to indicate their significance as the most influential factors in teacher training.

Figure 3:*Distance metric*

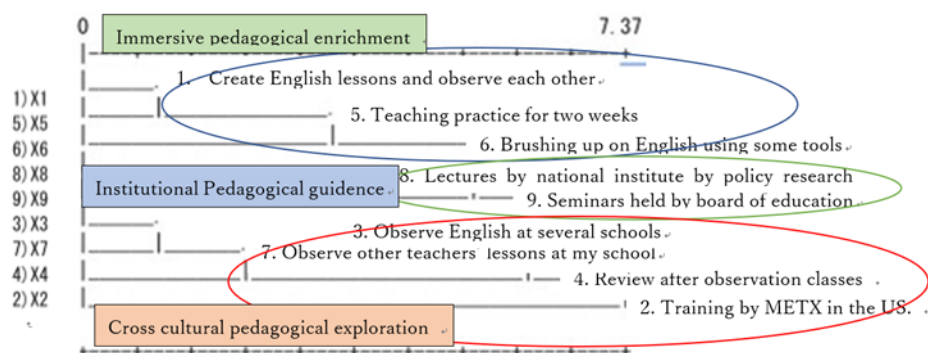
Note. Figure 3 presents paired word components directly from participants' responses based on data from Table 1. This figure's vertical and horizontal numbers correspond to the priority order numbers assigned based on the primary data collection.

Figure 4:

Dendrogram generated by the system for question 1.

**Figure 5:**

Dendrogram, Cluster Analysis for Question 1, and Planned Cluster Division.



After analysing clusters from three questions, the study identifies nine key themes regarding the impact of teacher training on Japanese Junior High School teachers' performance. These themes, detailed in Table 2, cover diverse training methodologies, pedagogical approaches, institutional support, and their effects on professional development and classroom effectiveness.

Table 2:
Finalized Themes and Factors in Teacher Training

Theme	Factors
Immersive pedagogical Enrichment	<ol style="list-style-type: none"> 1. Create and observe English lessons collaboratively. 2. Engage in teaching practice for a duration of two weeks. 3. Refresh English skills using various tools such as books and apps.
Institutional Pedagogical Guidance	<ol style="list-style-type: none"> 1. Attend lectures by the National Institute for Education Policy Research. 2. Participate in seminars organized by the board of education at the city or prefecture level.
Cross-Cultural Pedagogical Exploration	<ol style="list-style-type: none"> 1. Observe English lessons at multiple schools. 2. Observe other teachers' lessons within their own school. 3. Revise teaching practices based on observations, in collaboration with some teachers. 4. Participate in training programmes by MEXT (Ministry of Education, Culture, Sports, Science and Technology) in the US.
Comprehensive Lesson Enhancement	<ol style="list-style-type: none"> 1. Conduct all lessons in English. 2. Take Teaching English to Speakers of Other Languages (TESOL) certification courses. 3. Learn how to design effective lessons.
Balanced English Proficiency Development	<ol style="list-style-type: none"> 1. Follow communicative-centered teaching methods. 2. Focus on improving students' skills in speaking, writing, listening, and reading. 3. Prepare for and take proficiency tests such as TOEFL, TOEIC, and EIKEN.
Comprehensive Teaching and Assessment Strategies	<ol style="list-style-type: none"> 1. Develop effective homework assignments. 2. Find strategies to motivate students,

	especially those who are slow learners.
	3. Create and administer tests that evaluate student learning accurately.
	4. Determine evaluation criteria for each lesson.
	5. Implement a grammar-centered teaching method where appropriate.
Training practicality	1. Value the practicality and usefulness of TESOL training.
	2. Seek more practical content in teacher training programmes.
	3. Appreciate the effectiveness of workshop-style training sessions.
Recognizing opportunity gap	1. Address the lack of opportunities for training in teaching methods. Address the lack of time available for self-improvement.
Enhancing Assessment Focus	1. Ensure training content aligns with practical teaching needs.
	2. Manage personal expenses for tests like TOEIC.
	3. Address the abundance of out-of-school training sessions for new teachers.
	4. Continue to find workshop-style training sessions beneficial.

The analysis reveals that key themes in English teacher training—such as immersive activities (lesson creation, peer observation), institutional guidance (lectures, seminars), and cross-cultural exploration—significantly improve teaching practices. Emphasizing balanced proficiency and practical assessment also enhances student evaluation. The need for tailored training programmes that integrate these elements is urgent and important for meeting evolving student needs and improving educational outcomes.

Conclusion and Recommendations

In conclusion, this study offers novel insights into the multifaceted impacts of English language teacher training on JHS teachers' performance. By identifying key themes, this research enhances our understanding on how different training factors influence instructional practices and educational outcomes. Continued investment in tailored training programmes will be

crucial for developing a dynamic and effective teaching workforce that meets evolving student needs in Japanese educational settings.

These findings underscore the need for tailored and comprehensive English language teacher training. Policymakers should enhance programmes by incorporating immersive and cross-cultural learning opportunities, strengthening pedagogical guidance, and integrating effective assessment strategies. Future research should focus on thematic analysis with multiple informants to build a robust theoretical framework and examine the long-term effects of training on student outcomes. Additionally, exploring optimal training formats that maximize teacher effectiveness and satisfaction will be crucial.

References

Fu, Q., Yao, J., Tan, Q., & Qui, R. (2021). Teacher training needs and their influencing factors: A case study of 13 Chinese border school teachers. *International Journal of Learning, Teaching and Educational Research*, 20(10), 331–349. <https://doi.org/10.26803/ijlter.20.10.21>

Mashizam, P. H., et al. (2018, December). Identification of training needs assessment in organizational context. ResearchGate. <https://www.researchgate.net/publication/333841199>

Naito, T. (1993). Idiographic cluster analysis of the climate of a single classroom. *The Japanese Journal of Experimental Social Psychology*, 33(2), 111–121.

Naito, T. (2003). *PAC bunseki-jisshihō nyūmon: "Ko" wo kagakusuru shingihō he no shōtai [Introduction to Practical PAC Analysis: An Invitation to a New Scientific Method for Single Cases]*. Kyoto: Nakanishiya.

Naito, T. (2015, July). Analyses of personal attitude construct on the difference of scheme of nonverbal communication style between Japanese and Korean. In *The 14th European Congress of Psychology: Final Programme* (p. 47).

EXAMINING CULTURALLY RESPONSIVE PEDAGOGY IN THE ESL CLASSROOM THROUGH TEACHERS' INSIGHTS: A CASE STUDY IN A SRI LANKAN STATE UNIVERSITY

P.D.S.N. Dissanayake^{1*}

*¹Department of English Language Teaching, Faculty of Business Studies and Finance,
Wayamba University of Sri Lanka*

Abstract

Given the rich diversity of ethnicities, languages, and customs, Sri Lanka presents a unique context for English as a Second Language (ESL) education. This qualitative pilot study investigates ESL teachers' understandings, current practices and experiences of Culturally Responsive Pedagogy (CRP) along with implications for its effective use at a state university in Sri Lanka. By triangulating data from semi-structured interviews with teachers, classroom observations and textbook analysis, the study reveals that while ESL teachers recognize the importance of CRP and valued cultural diversity and national identity, their implementation is limited. This limitation is challenged by a lack of deeper understanding, relevant resources and strategies, professional training, an inclusive curriculum along with linguistic barriers. This can be interpreted as a form of educational inequity, as learners barely receive culturally responsive support tailored to their backgrounds needed to facilitate positive educational outcomes. The insights offer valuable implications for teacher training, curriculum development, and educational policy regarding the adoption of CRP in the adult ESL classroom.

Keywords: *Challenges, CRP, Diversity, ESL, Implications*

**Corresponding author: Tel.: +94 (77) 794 2203; Email: sandapa@wyb.ac.lk;
<https://orcid.org/0000-0001-5869-9211>*

Introduction

In Sri Lanka, cultural diversity is primarily characterized by its multiethnic, multireligious and multilingual population comprising the principal ethnic groups, namely Sinhala, Tamil, and Muslim, and religions including Buddhism, Hinduism, Islam, and Christianity. The linguistic diversity recognizes Sinhala, and Tamil as two national languages, and English serving as the link language, commonly used in the society, administration and education. This diversity is evident in state universities, which attract students from various cultural, linguistic, and socio-economic backgrounds across the country. Within this context, a sense of national identity emerges when students experience a real-life, locally relevant teaching and learning process.

In Sri Lankan state universities, education is delivered mainly in English medium, resulting in a great emphasis on ESL teaching that can bridge linguistic and cultural gaps while promoting interethnic cohesion. ESL classrooms in Sri Lankan universities are multicultural environments where teachers face the challenge of catering to diverse needs and learning styles while promoting equitable outcomes. Both students and teachers bring their local cultural identities into these classrooms, necessitating teaching approaches that reflect the learning preferences and ways of knowing of the learners (Gay, 2010), because culture is “at the heart of all we do in the name of education, whether that is curriculum, instruction, administration, or performance assessment” (Gay, 2010, p. 8).

Culturally responsive pedagogy (CRP) offers a theoretical framework for integrating students' cultural contexts into instructional practices, aiming to make learning more meaningful, interesting and engaging by situating academic knowledge within students' lived experiences (Gay, 2001). According to Gay (2010, p. 44), CRP involves five essential components: teacher attitudes and expectations, cultural communication in the classroom, culturally diverse curriculum content, culturally congruent instructional strategies, and a culturally responsive learning environment. Teachers should view cultural diversity as a strength, maintain high expectations for all students, and understand diverse communication styles. Teachers need to effectively communicate using diverse verbal and non-verbal communication styles with an understanding of cultural nuances. The curriculum should include materials reflecting students' cultural diversity, and instructional strategies should align with different learning styles and cultural experiences and examples. A conducive learning environment where learners become a culturally responsive community through “cultural scaffolding” (Gay, 2001, p. 109) can promote collaboration, acceptance, and mutual respect, supporting

both academic and social-emotional growth. Teaching that is framed within these elements will create an inclusive learning environment.

Research indicates that CRP positively impacts student motivation, engagement, and cross-cultural understanding (Jalil, 2023), fostering diverse worldviews and open-mindedness (Samuels, 2018). Nevertheless, educators may encounter challenges like limited cultural knowledge, narrow cultural understanding, and insufficient resources (Samuels, 2018). Discussions about CRP in adult education, particularly in ethnically and linguistically diverse classrooms, are limited (Rhodes, 2015), and there is a significant research gap concerning its implementation in Sri Lankan ESL classrooms at the university level. This gap highlights the need for tailored investigations to understand specific practices, opportunities, and challenges within Sri Lanka's unique educational context.

Material and Methods

This qualitative case study was designed as a pilot study to examine the incorporation of culturally responsive teaching practices in the ESL classroom of a state university in Sri Lanka and obtain an in-depth understanding of the context-specific application of CRP. Three ESL teachers who were teaching business students in the first year were selected as the participants. Data were collected and triangulated through semi-structured interviews, classroom observations, and textbook analysis. Braun and Clarke's (2006) inductive approach of thematic analysis were adopted in data analysis that was guided by Gay's (2010) principles of CRT. The textbook was analysed using content analysis. The research questions focused on how the ESL teachers in a Sri Lankan state university perceived CRP, and responded to its implementation, what specific CRP practices were employed by them and to what extent were these practices integrated into their teaching, challenges they encountered when implementing CRP, and implications for effective CRP practices.

Results and Discussion

Several key themes emerged from the analysis such as a basic awareness of CRP concepts, limited use of culturally responsive practices, linguistics barriers, resource and textbook limitations, difficulties in cultural competence and professional training, insufficient reflective practices and lack of critical consciousness in engaging with culturally relevant issues.

Building on these themes, one key finding was that the participant teachers demonstrated a basic awareness of CRP concepts. The deeper understanding needed for effective implementation in practice was not apparent. For instance,

they vaguely identified it as including different cultural examples, such as names, celebrations, etc. According to Gay (2010), CRP involves not only recognizing cultural diversity, but also using students' cultural knowledge, prior experiences, linguistic diversity, gender roles, critical consciousness and performance styles to make learning more relevant and effective. While CRP does not explicitly address the concept of national identity, it can be adapted based on the general principles of CRP as an essential element to ensure relevance and to reflect local backgrounds along with lived realities in the tertiary ESL classroom.

Although the teachers recognized the importance of addressing the needs of culturally diverse students, with positive attitudes towards their backgrounds, they did not demonstrate a strong commitment to CRP and minimally incorporated CRP practices into their instruction by incorporating students' cultural backgrounds into existing lessons and utilising some culturally relevant resources. For instance, they used role-playing activities where students were assigned names and roles from different cultural backgrounds such as Fahzil, Julian, Rani, Susila, Mohommod, Ven. Asanga, Father Mark, etc. This aligns with Gay's (2010) emphasis on cultural scaffolding. In addition, although English was the medium of instruction, teachers frequently switched to Sinhala, which was their first language, to explain the content and ensure understanding. Linguistic responsiveness is crucial, and switching languages can have both pros and cons (Gay, 2010). This linguistic limitation can alienate non-Sinhala speaking students.

The textbook analysis revealed certain limitations such as predominantly featuring Western contexts, and lack of representation of the local Sri Lankan cultural diversity and national identity. For example, most of the content was primarily designed around British heroes, idioms, and stories like Aesop's fables, etc. Although some potentially inclusive activities, such as discussing personal heroes and moral stories were included in the textbook, they were not sufficiently anchored in the local cultural context of Sinhala, Tamil, and Muslim students. Inadequate representation of local identity makes them less engaged with real-life scenarios that may challenge them to use language practically. As Gay (2010) posits, CRP requires materials and examples that reflect students' cultural backgrounds to foster relevance and engagement. The textbook's lack of cultural content may restrict the teachers' ability to provide culturally relevant examples and engage students effectively.

In fact, the ESL teachers identified challenges related to the effective implementation of CRP. They struggled with a lack of cultural competence, relevant resources, and found it difficult to understand and integrate students'

cultures beyond their own. Additionally, they faced challenges in linguistic responsiveness, often switching to Sinhala to aid comprehension. They highlighted the lack of professional training and innovative pedagogical ideas to support CRP. Moreover, teachers lacked critical consciousness too. The lack of deeper understanding in CRP was evident in the absence of promoting learners' critical thinking about social issues like social justice, cultural community challenges in discussions or activities. Accordingly, ESL teachers can encourage learners to think critically about their communities and sensitize. Aligning with Gay's (2010) view, discussions on traditional gender roles on educational opportunities and career choices through different leaders and activists, narratives of people who have worked towards ethnic harmony, and respect, can be generated in the ESL classroom. Nevertheless, some participants had a fear that they may create cultural conflicts among students.

Moreover, reflective practice on CRP was insufficient, as teachers were not used to engage in consistently evaluating and adapting their methods to cater to diverse cultural needs. Although teachers recognized the importance of cultural diversity in theory, they were not prepared to integrate these principles into their teaching practices effectively.

Conclusion and Recommendations

In conclusion, the study underscored the limited incorporation of CRP in the ESL classrooms of a Sri Lankan state university. This pilot study contributes to the understanding of the ESL teachers' beliefs and practices with regard to CRP in culturally diverse adult learning settings to enhance teaching and curriculum development. Systematic support for CRP implementation through professional training, collaborative teacher communities, access to resources and materials, and constant feedback is essential for promoting inclusivity and equity for all ESL learners to reach their academic success. It is significant that educational policymakers mandate policy measures regarding the above suggestions to create a more inclusive and equitable learning environment, thereby supporting ESL undergraduates.

References

- Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education*, 53(2), 106–116.
- Gay, G. (2010). *Culturally responsive teaching: Theory, research, and practice*. Teachers College Press.
- Jalil, C. R. A. (2023). The application of culturally and linguistically

responsive pedagogy in English speaking classrooms – A case study. *International Journal of English Language Teaching*, 11(2), 72–91. <https://doi.org/10.37745/ijelt.13/vol11n27291>

Rhodes, C. M. (2015). Culturally responsive teaching with adult language learners. *Adult Education Research Conference*. <https://newprairiepress.org/aerc/2015/papers/45>

Samuels, A. J. (2018). Exploring culturally responsive pedagogy: Teachers' perspectives on fostering equitable and inclusive classrooms. *SRATE Journal*, 27(1), 22–30.

ESL TEACHER PERCEPTIONS OF CLASSROOM MANAGEMENT STYLES: A CASE STUDY IN SRI LANKAN SCHOOLS

S.T. Delpachithra^{1*}

¹ *Department of Languages, Sabaragamuwa University of Sri Lanka*

Abstract

This study explores secondary ESL teachers' perceptions of classroom management styles and their impact on teaching and learning in Sri Lanka. The study highlights the challenges faced by both teachers and students in ESL classrooms and the necessity of effective classroom management. Ten secondary-level ESL teachers from various education zones participated in semi-structured interviews, and the data were analysed using Thematic Analysis (TA). Findings reveal that the teachers lack sufficient theoretical knowledge of classroom management styles, limiting their ability to apply them effectively. The study suggests that combining multiple management styles can enhance student engagement and performance. Furthermore, it underscores the importance of understanding students' needs before implementing management strategies. The research offers valuable insights for ESL teachers, educational authorities, and institutions, recommending targeted training programmes. Future studies could expand this research to explore ESL classroom management in state and private universities in Sri Lanka.

Keywords: *Classroom Management Styles, English*

*Corresponding author: Tel.: +94 71 9102038; Email: samadhi98ntsm@gmail.com

Introduction

In Sri Lanka, English remains crucial in the secondary education, despite that it is not being each school's primary language of instruction. However, as De Mel (2007) pointed out, the desired outcomes in English Language Teaching (ELT) have not been achieved, as many students who pass GCE O/L and A/L exams still lack the communicative skills required in the job market. Both teachers and students face numerous challenges in ELT classrooms, and despite ongoing research and proposed solutions, little progress has been made.

Diana Baumrind, a developmental psychologist at the University of California, Berkeley, in the 1900s, discovered four classroom management styles such as authoritarian, authoritative, permissive, and indulgent. Each of them carries both effective and inadequate functioning in classroom performance. Thus, the study explores ESL teachers' awareness of classroom management styles and how it impacts student learning. It reveals the importance of these management styles and the use of them in overcoming classroom challenges. By highlighting the positive effects of effective classroom management, this research aims to motivate teachers to improve their understanding and approach, ultimately benefiting both teachers and students in Sri Lanka's ELT pedagogy.

Material and Methods

This qualitative study utilized semi-structured interviews with English teachers from various education zones to collect data and the findings were arranged, analysed, and interpreted employing the Thematic Analysis. Participants were given a questionnaire with ten questions before the interviews, which consumed 40-50 minutes to answer. The analytical framework was tailored to the study's context, allowing for additional questions as needed. Many teachers lacked awareness of classroom management styles, prompting the interviewer to provide necessary education on the concepts.

Secondary English teachers of both international and state schools in Sri Lanka were taken as participants in this study. Specifically, ten secondary English teachers despite their gender and age were selected to collect data to receive more generalized results. As the educational zone, language, religion, technological orientations, and urban and rural diversity affect English teaching and learning in Sri Lanka, the participants were selected from several areas of the country instead of being framed into one education

zone.

Secondary data were also collected from existing literature, which largely focused on classroom management styles in other countries, as limited research exists on this topic in Sri Lanka.

Results and Discussion

The study aims to explore teacher perceptions of classroom management styles in teaching English in Sri Lanka. Using semi-structured interviews, the research findings were analysed and supported by previous literature to ensure accuracy.

Teacher Awareness of Classroom Management Styles

Participants generally lack awareness of classroom management styles, leading to difficulties for teachers and students. Many rely on personal experience instead of theory. Recent training programmes have inadequately addressed these styles, especially for teachers under 40. The study emphasises the need for comprehensive training to enhance the effectiveness of teaching ESL.

Teacher Perceptions on Classroom Management Styles

Authoritarian Classroom Management Style

Many participants in the study believe that the authoritarian style, which emphasises control, punishments, and barriers, is “outdated and impractical” (Participant 8). They argue that such methods create tension, anxiety, and a lack of harmony in the classroom, and hinder students' willingness to participate and engage. Participants suggest that a friendly and supportive approach is more effective in managing classrooms, especially considering students' natural fear of the English language and their tendency to be playful and loud.

Authoritative Classroom Management Style

The participants argued that this style balances freedom and guidance, deemed healthier than other styles. Secondary students are sometimes playful and arbitrary, and they require restrictions and rules (Participant 2). Being overly friendly can undermine respect and productivity (Participant 10). Therefore, this approach offers necessary guidance in learning English, but some declared that this may create overly controlling environments and prioritize standards over student development, posing mixed effects in Sri Lankan secondary classrooms.

Permissive Classroom Management Style

This style is practiced when teachers take a hands-off approach, allowing students more freedom and autonomy in their learning. Participant 1 argued that it fosters critical thinking and problem-solving skills. However, critics, such as Participant 10, argued that it may not provide enough support for students learning ESL, potentially leading to poor outcomes in exams and unequal participation. Participants also noted concerns about maintaining discipline and clarifying teacher-student roles.

Indulgent Classroom Management Style

The indulgent classroom management style prioritizes a friendly and supportive teacher-student relationship. Many students prefer this style as it fosters a positive and active classroom environment. Participants believe it helps in building trust and rapport between teachers and students, which can aid students in overcoming personal issues. However, some participants (Participants 4, 10) argued that it lacks structure and discipline, leading to potential academic shortcomings and a lack of respect for the teacher.

The Influence of Teachers' Gender on Classroom Management Styles

According to the data, female teachers tend to prefer indulgent and permissive styles, emphasizing warmth and student interaction, while male teachers, on the other hand, lean towards the authoritative style, focusing on maintaining control while allowing some freedom.

The Importance of Classroom Management Styles in ESL Classroom

Since students have varying levels of competency in English and come from diverse backgrounds, ESL teachers emphasised several benefits of effective classroom management styles:

1. Structured Environment
2. Promoting Active Engagement
3. Addressing Individual Needs
4. Fostering Positive Relationships
5. Maximizing Instructional Time
6. Developing Self-discipline and Autonomy

Applying Several Classroom Management Styles Simultaneously

Each style has strengths and weaknesses. The benefits of employing multiple styles include accommodating individual differences, creating an interactive learning environment, promoting holistic student development, fostering classroom harmony, and providing flexibility to meet diverse student needs

and adapt to changing teaching environments.

Challenges of Applying Classroom Management Styles

The results highlight the lack of awareness among teachers about the four classroom management styles as a major obstacle. Participants noted that professional training is essential to ensure that the teachers are well-equipped with this knowledge. Limited resources in classrooms also hinder the effective implementation of management styles, potentially leading to student disengagement.

Conclusion and Recommendations

The study focuses on ESL teachers in Sri Lanka, exploring their perceptions of classroom management styles amid the challenges faced by both teachers and students. It highlights the significant role of classroom management in ESL education, especially given that teachers often manage 40-50 students. Although participants recognized the importance of these styles, most lacked a thorough understanding, contributing to challenges in ESL teaching. The study found that male teachers tend to favour authoritative management styles, while female teachers lean toward indulgent approaches. The participants criticized the authoritarian style as outdated and impractical. Additionally, the research suggests that employing a variety of classroom management styles enhances student engagement, fosters strong relationships, and accommodates diverse learning needs. While challenges remain in implementing these strategies, the findings indicate that effective classroom management could alleviate issues like anxiety and shame related to learning English, leading to improved outcomes for both teachers and students in Sri Lanka.

The study identifies barriers to implementing classroom management styles and proposes strategies to overcome them. It stresses the importance of teachers acquiring theoretical knowledge through self-directed study or professional training. The study also highlights the need for teachers to be attentive to student preferences and adjust their teaching accordingly, recommending the use of multiple management styles and innovative resources like audio-visual aids and interactive activities to enhance ESL teaching.

References

Braun, V., & Clarke, V. (2012). Thematic analysis. In *Handbook of Research Methods in Psychology* (Vol. 2). <https://doi.org/10.1037/13620-004>

De Mel, S. (2007, September 22). The politics of education and unemployment. *Daily News*.

Evertson, C. M., & Weinstein, C. S. (2006). Classroom management as a field of inquiry: Research, practice, and contemporary issues. In *Classroom Management* (pp. 3–16).

Wenning, J., & Vieyra, E. (2020). *Classroom management* (1st ed.). AIP Publishing.

FIRST YEAR UNDERGRADUATES' PERCEPTIONS OF A READING CLUB AS A LANGUAGE SUPPORT PROGRAMMEME AT A FACULTY OF MEDICINE OF A STATE UNIVERSITY

P.W.R.C. Wijenayaka^{1*}

¹ *Department of English Language Teaching, Faculty of Business Studies and Finance Wayamba
University of Sri Lanka*

Abstract

Amidst the linguistic diversity of Sri Lanka, English is regarded the most suitable medium for medical education due to its global significance, facilitating access to contemporary medical literature and enhancing professional communication. However, many new university students struggle with reading and understanding scientific texts in English, which is crucial for their academic and professional growth. This study examines the impact of an English Medium Reading Club (EMRC) established at a state university in Sri Lanka as a language support programme for the first-year medical students. Through surveys conducted before and after the implementation of the club, as well as reading logs and group discussions, the study found that participants viewed the club as an effective language support programme. It helped improve their reading skills and fostered a positive attitude toward reading in English. The findings offer valuable insights for English language educators, highlighting the importance of such initiatives in supporting students during their challenging first year at the university.

Keywords: *English Medium Reading Clubs, Language Support Programmemes, Medical Education, Reading Skills, Undergraduates*

**Corresponding author: Email: ruwini@wyb.ac.lk;*

Introduction

Proficiency in English is indispensable within Sri Lankan medical education, serving as the primary medium for engaging with scientific literature, participating in global discourse, and achieving academic success. Nonetheless, many first-year students face considerable challenges in comprehending essential English-language texts. Establishing an English Medium Reading Club (EMRC) may offer targeted linguistic support, enhance critical reading skills, and better prepare students for the academic and professional demands of the medical field.

From the outset, the ability of students to comprehend scientific articles has caused great concern in the literature. Medical students need to carefully read and understand essential scientific articles in English to comprehend clinical practice in scientific research. These two skills, reading and understanding, form a basic requirement since medical practice substantially depends on scientific research (Kelly & Shanley, 2010). Hence, acquiring knowledge through reading is crucial for the learning process of a medical student.

It is observed that most of the new entrants to the universities are reluctant to read in English and effective measures should be taken to engage them reading as it is crucial for their academic and professional development. Despite the traditional classroom teaching of reading, language support programmes play a pivotal role in improving language skills of the undergraduates.

The English Medium Reading Club (EMRC) acts as a language support programme which targets at promoting academic success, fostering confidence, and preparing individuals for the linguistic demands of both educational and professional settings. Launching an EMRC for the faculty of medicine can contribute to a culture of continuous learning, collaboration, and improved language proficiency among the undergraduates. Since research interventions targeting specific language support programmes like EMRC are limited in the Sri Lankan context, this research aims at establishing an EMRC and assessing the first-year undergraduate perception of the same.

Research questions

1. What are the benefits of establishing an English Medium Reading Club (EMRC) at the Faculty of Medicine?
2. What are the students' perceptions towards EMRC?

Material and Methods

This study adopted a mixed method for data collection, and well-structured questionnaires were designed in Google forms. In this data collection tool, both open-ended and closed-ended questions were included. Questionnaires were sent through email and WhatsApp to the students. In addition, the participants were guided to write reading logs and reflections on the EMRC which was established with volunteer participants. Data was analysed using thematic analysis technique. The study design is briefly described as follows.

Pre- and post-surveys: A pre-club survey was administered at the beginning of the semester to collect baseline information on participants' language proficiency, confidence levels, and attitudes toward reading in English. A post club survey assessed the changes in students' language proficiency, communication skills, and overall satisfaction according to their perspective.

Reading logs and reflections: Participants maintained reading logs to record their reflections, new vocabulary, and any challenges faced during the reading process.

The establishment of the English Medium Reading Club: Establishing an English reading Club for the Faculty of Medicine was a significant initiative which fostered academic development among the undergraduates. Fifteen volunteer participants were enrolled as the members of the reading club as reading should be done without any force. The reading club was initiated by exposing the students to simple reading materials like story books, brochures and notices. Next, more complex materials such as recent research articles, medical journals and literature related to medical education and practice were used. In addition, different types of readings were mixed up to keep the content diverse and interesting.

Moreover, the students were encouraged to read in English in groups and individually. The language teacher acted as a facilitator who motivated the students in sharing their insights, posing questions and relating the readings to personal experiences and world. Moreover, a guest speaker was invited to discuss specific topics related to the readings which provided additional insights and perspectives. A collaborative and supportive atmosphere was fostered for the students to feel comfortable sharing their thoughts and learning from peers. The discussions on the readings included vocabulary building activities and short presentations.

Results and Discussion

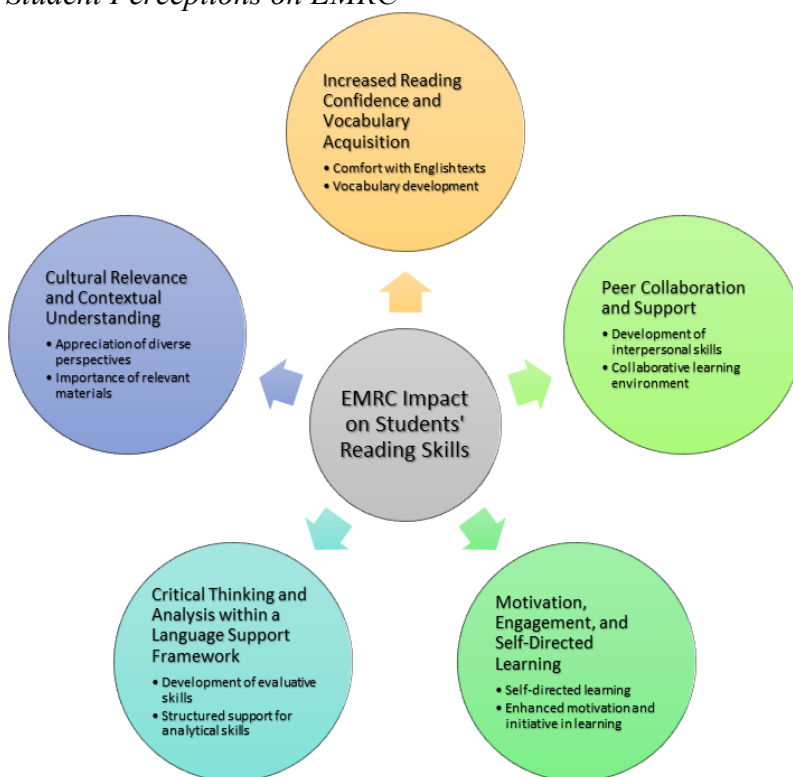
The data analysis for this study involved both quantitative and qualitative approaches to assess the impact of the EMRC on the first-year medical students.

Quantitative Analysis: The pre and post-club surveys, designed to investigate the perceptions of the participants on the changes in language proficiency, reading confidence, and overall attitude toward reading in English, were statistically analysed to determine any significant differences. Results showed that students' reading confidence, vocabulary knowledge, and comfort with English texts improved notably after participating in the EMRC.

Qualitative Analysis: Qualitative data from reading logs, reflections, and group discussions were analysed thematically to capture recurring patterns in students' experiences with the EMRC. This thematic analysis revealed several key themes, which illustrate how the EMRC supported language development and reading confidence among students. Key themes identified included Increased Reading Confidence, as students felt more comfortable with English texts over time; Enhanced Vocabulary Acquisition, where participants reported an improved vocabulary foundation essential for reading medical literature; Peer Collaboration and Support, as the EMRC facilitated a supportive, collaborative environment for approaching challenging texts; and Motivation and Engagement, where students expressed heightened motivation for reading in English, encouraged by the club's structured support and accountability.

Another emergent theme, EMRC as a Language Support Programme, highlighted students' perception of the EMRC as a valuable, flexible resource for language support, providing a structured environment that complemented their formal learning. Self-Directed Learning was also a significant outcome, as many students began independently seeking additional resources, taking ownership of their learning process. Additionally, Cultural and Contextual Relevance enhanced their connection to the reading material, while Critical Thinking and Analysis demonstrated their growth in engaging critically with scientific texts. These themes are illustrated in figure 1.

Figure 1:
Student Perceptions on EMRC



Conclusion and Recommendations

In conclusion, the EMRC proved to be a beneficial support system, enhancing students' reading confidence, vocabulary acquisition, and engagement with English texts in a collaborative environment. Based on these findings, it is recommended that similar language support programmes should be integrated into university curricula to assist students in developing essential language skills. This intervention could be adapted across other faculties to support students facing similar challenges in language proficiency and engagement with academic texts.

References

- Alexander, J. E., & Filler, R. (1976). *Attitudes and reading*. International Reading Association.
- Artieda, G. (2017). The role of L1 literacy and reading habits on the L2 achievement of adult learners of English as a foreign language. *System*, 66, 168–176. <https://doi.org/10.1016/j.system.2017.03.020>

De Silva, A. H. W., & Premawardhena, N. N. (2018). An investigation of the perceptions and challenges of English as a medium of instruction (EMI) in medical education in Sri Lanka. *International Journal of English Language Education*, 6(2), 36–54.

Fernando, R. L. (2017). Determinants of academic performance of undergraduates of the Faculty of Management Studies and Commerce of the University of Sri Jayewardenepura in Sri Lanka. *PEOPLE: International Journal of Social Sciences*, 3(2), 1077–1101. <https://doi.org/10.20319/pijss.2017.32.10771101>

Green, P. (2002). Teachers' intervention in children's reading. *Journal of Childhood Education*, 46(3), 147–149.

Irvin, J. L. (1998). *Reading and the adolescent learner*.

Kelly, K., & Shanley, P. (2010). The development and implementation of a curriculum innovation based on reading published case studies and biomedical research reports.

Pandian, A. (2000). Reading and middle school students: Strategies to enhance literacy.

Seneviratne, T. (2019). Sinhala as the medium of instruction in medical education: Perception of medical students in Sri Lanka.

Smith, J. K. (2018). The role of English proficiency in accessing scientific literature in medical education.

Wijayatunga, A. (2018). English as a medium of instruction in secondary schools in Sri Lanka: Challenges. *International Conference on Education*. <https://doi.org/10.17501/icedu.2018.4117>

AN EXAMINATION OF THE PEDAGOGICAL IMPACT OF FLIPPED LEARNING ON INSTRUCTION IN ENGLISH AS A SECOND LANGUAGE CLASSROOMS

T.M.B.N. Thennakoon^{1*}

*¹Department of Marketing Management, Faculty of Commerce and Management Studies,
University of Kelaniya*

Abstract

Flipped learning transforms English as a Second Language (ESL) instruction by inverting traditional methods to prioritize interactive learning experiences. This study investigates the pedagogical impact of flipped learning on language proficiency and student engagement in ESL classrooms. Through qualitative research, educators' and learners' insights into flipped learning are explored, highlighting its potential to create dynamic and participatory learning environments. By delivering instructional content online outside of class, flipped learning optimizes face-to-face sessions for collaborative activities and application exercises. Interviews with ESL educators and students provide rich insights into the benefits and challenges of flipped learning implementation. The study revealed that flipped learning enhances language acquisition by encouraging active student participation and personalized learning experiences. Educators highlighted that the increase in student engagement and motivation was fostered by using interactive online resources and flipped classroom activities, which enabled learners to engage with the material more deeply and at a personalized pace. Furthermore, this research emphasises integrating technology in ESL to tailor learning experiences for diverse learner needs. It is evident that flipped learning holds the potential to revolutionise ESL pedagogy by enhancing language comprehension and preparedness.

Keywords: *ESL Classrooms, Flipped Learning, Language Proficiency, Pedagogical Impact, Student Engagement*

**Corresponding author: Tel.: +94 76 927 5682; Email:
bhagyathennakoon95@gmail.com; <https://orcid.org/0000-0003-4215-7690>*

Introduction

Flipped learning has received significant attention in educational research as a transformative approach to instruction, particularly in the field of English as a Second Language (ESL) instruction. This innovative pedagogical model flips the traditional classroom structure by delivering instructional content online outside of class time while utilising face-to-face sessions for collaborative activities, application exercises, and deeper engagement (Bergmann & Sams, 2012). This transformative approach aims to enhance student-centered learning experiences and foster active participation among learners.

In ESL classrooms, where language acquisition and proficiency development are paramount, the integration of flipped learning holds the potential for addressing diverse learner needs and optimizing instructional outcomes. By leveraging digital resources and interactive platforms, educators can personalize learning experiences and cater to individual learning styles, thereby promoting deeper understanding and retention of language concepts (Hamdan et al., 2013).

Research on flipped learning in ESL contexts has highlighted its potential benefits. For instance, a study by Tucker (2012) examined the impact of flipped learning on student engagement and found that students exhibited increased motivation and ownership of their learning process. Similarly, Hamdan et al. (2013) emphasised the role of flipped learning in fostering collaborative learning environments and enhancing critical thinking skills among ESL students. Moreover, the effectiveness of flipped learning in ESL instruction extends beyond traditional measures of academic achievement. According to Bishop and Verleger (2013), the flipped classroom model encourages active learning and promotes higher-order thinking skills, such as problem-solving and analytical reasoning, which are crucial for language acquisition and communication proficiency.

Despite its growing popularity, the implementation of flipped learning in ESL classrooms poses challenges and requires careful consideration of instructional design and technological integration (Strayer, 2007). Educators must navigate issues related to accessibility, equity, and digital literacy to ensure equitable learning opportunities for all students.

This study aims to contribute to the existing literature by investigating how flipped learning enhances ESL instruction, focusing on its impact on language proficiency and student engagement. The research gap lies in the need to explore how flipped learning specifically impacts language

acquisition and engagement in diverse ESL contexts, with limited qualitative studies addressing this aspect comprehensively. Through qualitative exploration of educators' and students' perspectives, the research seeks to uncover valuable insights into the transformative potential of flipped learning in ESL teaching and learning.

Material and Methods

This study employs a qualitative research design to explore the impact of flipped learning in ESL classrooms. A phenomenological approach is used to capture the lived experiences of both educators and students. Data is collected through semi-structured interviews with 5 ESL instructors and 30 students from diverse educational backgrounds who have engaged in flipped learning initiatives from a state university in Sri Lanka. Participants are selected using purposive sampling to ensure a range of perspectives. Interviews are conducted in person and via video conferencing, recorded, and transcribed for analysis. Thematic analysis is applied to identify recurring themes and insights related to the pedagogical impact of flipped learning. Additionally, classroom observations are conducted to supplement interview data and provide a comprehensive understanding of the instructional dynamics. This methodology aims to uncover nuanced perceptions and experiences, offering in-depth insights into the effectiveness of flipped learning in enhancing language proficiency and student engagement in ESL contexts.

Results and Discussion

The findings of this study reveal significant insights into the pedagogical impact of flipped learning on ESL instruction, highlighting both its benefits and challenges as perceived by educators and students. From the interviews, it is evident that flipped learning positively influences student engagement and language proficiency. Educators reported that students were more active participants in their learning process, showing increased motivation and preparedness for class activities. This shift in student behaviour can be attributed to the pre-class exposure to instructional content, which allows in-class time to be dedicated to interactive and application-based activities. As one educator noted, "Students come to class ready to discuss and apply what they've learned, which makes the classroom more dynamic and engaging."

Students echoed these sentiments, expressing that flipped learning helped them better understand and retain language concepts. The opportunity to review instructional videos at their own pace was particularly beneficial for grasping complex grammatical structures and vocabulary. One student

mentioned, "I can pause and rewatch the videos as many times as I need, which helps me understand the material." This self-paced learning component is a crucial aspect of flipped learning, allowing students to take ownership of their learning and address their individual needs.

The thematic analysis also highlighted the enhanced interaction between students and teachers in a flipped classroom. With the traditional lecture format minimized, teachers could focus more on facilitating discussions, addressing individual student queries, and providing personalized feedback. This change in the teacher's role from a lecturer to a facilitator was widely appreciated. Educators felt they could better support students' language development through targeted guidance and scaffolding. This aligns with the findings of Bergmann and Sams (2012), who emphasised the potential of flipped learning to transform teaching practices and improve student-teacher interactions.

However, the implementation of flipped learning is not without its challenges. Both educators and students emphasised the necessity for reliable access to technology and the Internet. For flipped learning to be effective, students need to have consistent access to online resources outside of class. In some cases, students from lower socioeconomic backgrounds faced difficulties in accessing these resources, which could hinder their learning experience. Educators also noted the additional time required to prepare instructional videos and materials, which can be demanding alongside their existing responsibilities. As one teacher remarked, "Creating quality video content takes time, and balancing this with other teaching duties can be challenging."

Despite these challenges, the overall sentiment towards flipped learning was positive. Many educators reported that once the initial setup was complete, the flipped model allowed more efficient use of class time and a richer learning experience for students. The collaborative nature of in-class activities fostered a supportive learning environment, where students could practice language skills in real time and receive immediate feedback. This was particularly beneficial for developing speaking and listening skills, that are crucial components of language proficiency.

The study also found that flipped learning encourages higher-order thinking skills. Students engaged in more critical thinking and problem-solving activities during class, rather than passively receiving information. This active learning approach aligns with the goals of ESL instruction, which aims to develop linguistic skills as well as the ability to use language

effectively in various contexts. This finding is consistent with the work of Bishop and Verleger (2013), who highlighted the potential of flipped learning to enhance cognitive engagement and promote deeper learning.

Hence, the findings of this study suggest that flipped learning can significantly enhance ESL instruction by fostering greater student engagement, improving language proficiency, and promoting active learning. However, the success of this approach depends on addressing the challenges related to accessing technology and the additional preparation required by educators. Future research should explore strategies to mitigate these challenges and investigate the long-term impacts of flipped learning on language acquisition. The study underscores the importance of adopting innovative teaching methods to meet the evolving needs of ESL learners and enhance the overall educational experience.

Conclusion and Recommendations

This study concludes that flipped learning enhances ESL instruction by increasing student engagement, improving language proficiency, and fostering active learning. However, challenges such as technology access and preparation time need addressing. It is recommended that institutions provide necessary technological support and professional development for educators. Further research should explore long-term impacts and effective strategies for integrating flipped learning into diverse ESL contexts, ensuring equitable access and maximising educational benefits.

References

- Bergmann, J., & Sams, A. (2012). *Flip your classroom: Reach every student in every class every day*. International Society for Technology in Education.
- Bishop, J. L., & Verleger, M. A. (2013). The flipped classroom: A survey of the research. In *ASEE National Conference Proceedings, Atlanta, GA* (Vol. 30, No. 9, pp. 1-18).
- Hamdan, N., McKnight, P., McKnight, K., & Arfstrom, K. M. (2013). *A review of flipped learning*. Flipped Learning Network.
- Strayer, J. F. (2007). The effects of the classroom flip on the learning environment: A comparison of learning activity in a traditional classroom and a flip classroom that used an intelligent tutoring system. *The Ohio State University*.
- Tucker, B. (2012). The flipped classroom. *Education Next*, 12(1), 82–83.

INVESTIGATING THE EFFECT OF TEACHERS' EMOTIONAL WELLBEING ON POLITE BEHAVIOUR AND ENGLISH TEACHING EFFECTIVENESS: A CASE OF ENGLISH TEACHERS IN BADULLA DISTRICT, SRI LANKA

K.P. Gunawardana^{1*}, H.M.S. Priyanath²

¹*Candidate of MA in English and Education, Faculty of Graduate Studies, Sabaragamuwa University of Sri Lanka, Belihuloya, Sri Lanka.*

²*Department of Economics and Statistics, Sabaragamuwa University of Sri Lanka, Belihuloya, Sri Lanka*

Abstract

This study investigates the effect of teachers' emotional wellbeing on polite behaviour, and English teaching effectiveness in the English teachers in Badulla District, Sri Lanka aiming to upgrade the existing suboptimal ELT practices. Utilising a quantitative method, the study gathers data through surveys involving 297 English teachers in the Badulla district, Sri Lanka as the study sample following multistage sampling. Partial Least Square Structural Equation Modeling (PLS-SEM) is used to analyse data. The results reveal that emotional wellbeing significantly affects polite behaviour and teaching effectiveness whereas polite behaviour has a significant impact on teaching effectiveness. The empirical results further confirmed that the polite behaviour of English teachers has a significant mediating effect on the relationship between emotional wellbeing and teaching effectiveness. This empirical evidence provides important insights to enhance teachers' emotional wellbeing, which will improve the effectiveness of English teachers through the improvement of polite behaviour.

Keywords: *Emotional wellbeing, English as a Second Language, English Teaching Effectiveness, Polite behaviour, Professional development.*

*Corresponding author: Tel.: +94 (70) 2468299; Email: kavipabaguna@gmail.com;

Introduction

Teachers, as the role models of their respective students, play an integral role in fulfilling the academic requirements of the students by providing emotional and social support. As teaching is an emotional endeavour, teachers experience a range of experiences that shape their classroom interactions. Teachers' emotional wellbeing plays a vital role in their overall effectiveness in achieving teaching goals. Positive teacher-student interactions lead to favourable outcomes, as teacher's behaviour significantly affects teacher-student rapport and effective communication in the classroom. The way teachers talk to students is the basis of any classroom activity that facilitates language learning, encouraging or discouraging students' active participation. However, scholars have not adequately studied how teachers' emotional wellbeing affects polite behaviour and teaching effectiveness, particularly in the Sri Lankan context. This study aims to investigate the impact of teachers' emotional wellbeing and polite behaviour on teaching effectiveness with a special focus on the ESL context in Sri Lanka.

Material and Methods

The key variables of this study underpin three existing theories. Teachers' emotional wellbeing (independent variable) is based on PERMA theory (Seligman, 2011), polite behaviour (mediating variable) is grounded in Brown and Levinson's Politeness Theory (1987), and English teaching effectiveness (dependent variable) is guided by Danielson's Framework for Teaching Evaluation (2011). Based on these theoretical dimensions, the following hypothetical relationships among variables are developed.

H1: Teachers' emotional wellbeing has a positive impact on the polite behaviour of English teachers.

H2: Teachers' emotional wellbeing has a positive effect on the teaching effectiveness of English teachers.

H3: Polite behaviour has a positive effect on the teaching effectiveness of English teachers.

This study adopts a quantitative method since the study is deductive and explanatory. The study employs a multistage sampling method to select the sample. First, the study selected Badulla district out of 25 districts in Sri Lanka using a simple random sampling technique. A total of 1294 English teachers are currently teaching English language and English literature in six education zones of Badulla district. Out of the total population, 297 English teachers are

selected as the sample size determination formula. Data were collected using a pre-tested structural questionnaire. Analysis of quantitative data was done involving inferential methods using PLS-SEM with the support of Smart PLS (version 4).

Results and Discussion

The study uses a measurement model and a structural model to investigate the relationship between variables. Following the assessment of variables through indicator reliability, the variables were assessed through composite reliability, convergent validity, and discriminate validity respectively. Then, the study created latent variables for each variable. Subsequently, the study assessed the multicollinearity and path coefficients between the independent and dependent variables and their significance. The results of the PLS-SEM analysis are summarized in Table 1.

Table 1:
Results of the PLS-SEM analysis

Hypotheses	Path Coefficient	T statistics	P values	Decision
Direct Effect				
H1: Emotional Wellbeing -> Polite Behavior	0.896	50.386	0.000	Accepted
H2: Emotional Wellbeing -> Teaching Effectiveness	0.628	14.964	0.000	Accepted
H3: Polite Behavior -> Teaching Effectiveness	0.335	7.730	0.000	Accepted
Mediating Effect				
H4: Emotional Wellbeing -> Polite Behavior -> Teaching Effectiveness	0.300	7.572	0.000	Partial Mediation

Results demonstrate that polite behavior increases by 0.869 with one unit increase in emotional well-being (t-value is 50.386) confirming the first hypothesis (H1). In line with the findings, Frenzel et al. (2021) highlight the importance of emotional wellbeing in creating a positive classroom environment as emotionally stable teachers act more positively in the classroom. The results show a 0.628 increase in teaching effectiveness with a one-unit emotional wellbeing increase (t-value is 14.964) confirming the second hypothesis (H2). Confirming the results of this study, Keller and Becker (2021) state that emotionally stable teachers create a constructive learning environment as emotional wellbeing enhances the quality of instructional methods with improves students' outcomes. Moreover, results

suggest that teaching effectiveness increases by 0.335 when polite behavior increases by one unit (t-value is 7.730) which confirms the third hypothesis (H3). It means that polite behavior reduces the gap between the teachers and the students leading to more effective teaching. It fosters a respectful classroom setting with an inclusive learning environment promoting enhanced learning outcomes. The role of polite behavior between emotional wellbeing and teaching effectiveness was confirmed as a partial mediation indicating a path coefficient of 0.300 (t-value is 7.572). Limited scholarly evidence is found on this specific mediation. However, Frenzel et al. (2021) note the healthy relationship between teachers and students with the influence of emotional wellbeing, enhances learning conditions.

Conclusion and Recommendations

The results of this study reveal a positive relationship among the teachers' emotional wellbeing, polite behaviour, and teaching effectiveness. Particularly focusing on English language teaching, improving emotional wellbeing can enhance polite behaviour, leading to more effective English language instruction in the Sri Lankan context. Teacher training and continuous professional development should mainly focus on developing teachers' emotional wellbeing and fostering polite classroom behaviour contributing to upgraded teaching practices and professional standards of English teachers.

References

- Brown, P., & Levinson, S. (1987). *Politeness: Some universals in language usage*. Cambridge University Press. <https://psycnet.apa.org/record/1987-97641-000>
- Danielson, C. (2011). *The Framework for Teaching Evaluation Instrument 2011 Edition*. Retrieved from <https://ospi.k12.wa.us/sites/default/files/2023-08/danielson-framework-teaching-evaluation-instrument-2011.pdf>
- Frenzel, A. C., Daniels, L., & Burić, I. (2021). Teacher emotions in the classroom and their implications for students. *Educational Psychologist*, 56(4), 250–264. <https://doi.org/10.1080/00461520.2021.1985501>
- Keller, M. M., & Becker, E. S. (2021). Teachers' emotions and emotional authenticity: Do they matter to students' emotional responses in the classroom? *Learning and Instruction*, 27(5), 404–422. <https://doi.org/10.1080/13540602.2020.1834380>
- Seligman, M. (2011). *Flourish: A visionary new understanding of happiness and well-being*. Free Press. <https://psycnet.apa.org/record/2010-25554-000>

THE EFFECT OF ECOLOGICAL ENVIRONMENTS ON STUDENTS' METACOGNITION AND ENGLISH LEARNING PERFORMANCE OF SECONDARY STUDENTS: A CASE OF BADULLA EDUCATIONAL ZONE IN SRI LANKA

E.M.S.D. Ekanayake^{1*}, H.M.S. Priyanath²

¹*MA in English and Education Candidate, Faculty of Graduate Studies, Sabaragamuwa University of Sri Lanka, Belihuloya, Sri Lanka.*

²*Department of Economics and Statistics, Sabaragamuwa University of Sri Lanka, Belihuloya, Sri Lanka.*

Abstract

The current research investigated the impact of ecological environments on metacognition and English learning performance among secondary students in Sri Lanka's Badulla Educational Zone, within the context of English as a Second Language (ESL). Quantitative data were collected from 390 school students and analysed through Partial Least Squares Structural Equation Modelling (PLS-SEM). The results revealed that the ecological environment including microsystems, mesosystems, exosystems, macrosystems, and metacognition, has a significant impact on English language learning performance among secondary students, and metacognition has a partial mediating effect on the relationship between the ecological environment and English learning performance. These findings indicated that a supportive ecological environment strengthens both metacognitive skills and English proficiency. Thus, it is important to include metacognitive strategy instruction and promote reflective learning conditions at schools, especially for disadvantaged students.

Keywords: *Ecological Environments, English Language Learning Performances, Metacognition, Secondary Students*

*Corresponding author: Tel.: +94 (74) 3518000; Email: sewwandidilenka@gmail.com;

Introduction

Ecological systems theory (Bronfenbrenner, 1979) illustrates the effect of different ecological environments on human development, which also includes the section on English language learning. In this respect, microsystems such as family, school, and peers are the main components that a student's metacognitive skills and language proficiency are affected by (Jaleel & Premachandran, 2016). Mesosystems are the relationships between these microsystems, like, how for instance, home and school settings interact and whether they enable language acquisition. Furthermore, the ecosystems are concerned with things like community resources that are beyond the immediate environment to indirectly improve learning opportunities (Kodithuwakku, 2008). Macrosystems are the dimensions of culture such as cultural values, and educational policies which are responsible for building learners' motivation for English proficiency (Flavell, 1979). The last is chronosystems which concern the timing of life events and transitions that have an impact on educational development. Proficiency in English thus holds the key to any prospective success in international education or employment (Johnson & Lee, 2018). Scholars have not given adequate attention to studying how the different dimensions of ecological environments affect metacognition and English language performance, particularly among secondary school students in Sri Lanka. The study attempted to fill this gap.

Material and Methods

The study attempted to analyse the causal relationship between the ecological environment, metacognition, and English learning performance. The study developed a conceptual research model combining these three variables and developed the following hypotheses:

H1: There is a significant positive relationship between ecological environments and students' metacognitive awareness.

H2: There is a significant positive relationship between metacognition and students' English learning performance.

H3: The ecological environment has a significant positive effect on English learning performance.

H4: The relationship between ecological environments and English learning performance is mediated by metacognitive awareness.

To test these hypotheses statistically, a quantitative approach in the positivism paradigm and an explanatory deductive approach were used since the key

variables of the study are sufficiently protected by theories. The study gathered primary data from the sample comprising 390 students from government schools in the Badulla district, Sri Lanka applying a multi-stage sampling technique. A pre-tested structural questionnaire was used to gather data. Survey responses were analysed using PLS-SEM with the support of the software Smart PLS version 4.

Results and Discussion

Initially, the study evaluated the validity and reliability of the reflective items and constructs. Internal consistency reliability, indicator reliability, convergent validity, and discriminant validity were employed to assess the reliability and validity of measurements. Thus, the study selected reliable and valid items to construct variables that are used to test hypotheses. The multicollinearity was tested initially, and then the significance of path coefficients, and R square was evaluated.

Table 1:
Path coefficients

Hypothesis and Path	Beta	T-Statistic	P-Value	Decision
H1: Ecological Environments → English Language Learning Performance	0.126	2.296	0.022	Accepted
H2: Ecological Environments → Metacognition	0.689	20.231	0.000	Accepted
H3: Metacognition → English Language Learning Performance	0.644	11.814	0.000	Accepted
H4: (Mediating Effect): Ecological Environments → Metacognition → English Language Learning Performance	0.444	9.741	0.000	Partial Mediating

The results statistically accepted hypothesis one (H1), demonstrating a positive association between the ecological environment and English language learning performance (See Table 1). This result is in line with other studies on the significance of environmental elements in language learning, which have shown that favourable and encouraging environments enhance language learning results. The strong empirical evidence is provided by the PLS-SEM analysis for the hypothesis (H2), which holds that secondary school students' metacognition is positively impacted by the ecological environment. This relationship is supported by previous studies (Bronfenbrenner, 1979) that have

emphasised the influence of the learning environment on altering students' cognitive processes. The study significantly supports the third hypothesis (H3), as metacognition has a considerable impact on English language learning performance. The findings show that students who have more awareness of their cognitive processes and actively engage in metacognitive methods are better prepared to learn English. This could entail self-monitoring comprehension, establishing explicit language learning goals, and altering techniques in response to feedback. The mediation analysis supports the fourth hypothesis (H4), which states that the ecological environment improves language learning outcomes by first strengthening students' metacognitive skills, which then lead to greater English performance. The findings focused on the significance of educational interventions that emphasise not only enhancing the learning environment but also increasing students' metacognitive abilities to maximize their language learning potential.

Conclusion and Recommendations

The study revealed that the ecological environments of students, such as their family, school, and community, had a significant impact on their metacognitive skills and English language performance. The more supportive and resource-rich the environment, the higher the English proficiency and the stronger the metacognitive ability. Externalizing metacognitive strategies in the English class setting and fostering a reflective learning atmosphere offsets the ecological differences' influence on the language learning achievements of students. Based on the results, schools should enhance English learning by integrating metacognitive strategy training, fostering reflective environments, and offering extra support to disadvantaged students to increase metacognitive growth and English proficiency. The results highlight the importance of schools integrating metacognitive strategy training into the curriculum and fostering reflective learning environments. Furthermore, the chronosystem did not demonstrate a significant effect, indicating that time-related environmental factors might not be as crucial in the process of language learning.

References

- Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. In Google Books. Harvard University Press.
- Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *American Psychologist*, 34(10), 906–911. <https://doi.org/10.1037/0003-066x.34.10.906>

Jaleel, S., & Premachandran, P. (2016). A study on the metacognitive awareness of secondary school students. *Universal Journal of Educational Research*, 4(1), 165–172. <https://doi.org/10.13189/ujer.2016.040121>

Johnson, H., & Lee, M. (2018). "Language Dominance in Academic Publication: Does English Hold the Key" *Journal of Linguistic Studies*, 12(3), 204-220. <https://doi.org/10.1016/j.lingstud.2018.07.004>

Kodithuwakku, G. (2008). Metacognitive writing strategies of Sri Lankan secondary school children [Research article Metacognitive writing strategies of Sri Lankan secondary school children, 31/32 (1-2), 27-46. <https://doi.org/10.4038/sljss.v31i1-2.5462>

AN INVESTIGATION INTO THE LANGUAGE-SPECIFIC CHALLENGES AND NEEDS OF THE FIRST YEAR UNDERGRADUATES IN AN ENGLISH MEDIUM INSTRUCTION (EMI) CONTEXT

H.P. Alahakoon^{1*}

¹*English Language Teaching Unit, General Sir John Kotelawala Defence University*

Abstract

This study explores the language specific challenges and needs of a selected group of first-year undergraduates studying in English Medium Instruction (EMI) at a Sri Lankan university. Through a qualitative approach including semi structured interviews and reflections, the gathered data were thematically analysed. The recurrent themes related to the participants' challenges were difficulties such as understanding technical vocabulary, writing grammatically correct English, and issues with listening and speaking. They expressed the need to improve their understanding of technical jargon, to have an enhanced language support system, and to establish a more studentcentered learning environment. The implications include revising the curriculum to integrate English for specific academic purposes, implementing content-based language teaching, and fostering peer collaboration to enhance learner autonomy. The study further underscores the necessity for universities to provide ongoing language support to ensure effective EMI delivery and improve students' academic performance and language skills.

Keywords: *Challenges, English Language Teaching, English Medium Instruction, Needs, Undergraduates*

*Corresponding author: Tel.: +94 (71) 4868931; Email: himeshaprabodini@kdu.ac.lk;

Introduction

EMI (English Medium Instruction) has evolved rapidly over the years. Yet the challenges and needs of English Language Teaching (ELT) and English Language Learning (ELL) remain unaddressed in the higher education sector in Sri Lanka. As indicated by Rogier (2012), EMI is necessary for students to be able to compete in a global world (p.122). Thus, EMI has been introduced in the Sri Lankan tertiary education system by considering the future job market and the factors of globalization. However, similar to Sri Lanka, and many Asian countries, EMI fails to provide academic content effectively (Sert, 2008). Therefore, classroom-level research into the second language-specific needs of undergraduates has been instrumental in identifying and solving EMI related difficulties of the students.

Material and Methods

The participants of this study were first-year undergraduates from the degree programme of Information and Communication Technology (ICT) at a government university in Sri Lanka. English was a supplementary module in their degree programme. Purposive sampling has been used in this study and out of an entire sample of 35 undergraduates, 16 voluntary participants participated in this study. The study was conducted in 02 phases pursuing the qualitative approach. In the first phase, semi-structured interviews were conducted with the participants to explore their challenges and aspirations. In the second phase, reflections written by the participants were collected.

Results and Discussion

The gathered data from the study were analysed qualitatively using thematic analysis. Herein, some prominent and recurring themes were generated.

I. Challenge of acquiring and understanding the subject-specific technical words in English

Participants stated their unfamiliarity and difficulty in recalling the meanings of the technical words of their discipline. The participants mentioned that this affected their scores in the exams and their overall academic performance.

“I have to remember the technical words with a lot of effort, especially in exams I don’t get good marks because I forget words.” (Student B).

II. Issues of writing words with correct spellings and grammatically correct sentences.

A majority of the participants have indicated that they have problems related

to writing in English. As described by them, their L1 influence, shortcomings in secondary education, and lack of usage of English were the causes for this issue.

“I use English only during lectures and after that we usually use Sinhala. When I was at school also English was taught only as a subject focusing O/L exams.” (Student F)

III. Challenges related to listening and speaking

The voluntary participants suggested that they have different issues in listening and speaking English. They have been unable to grasp the course content, and the majority express their reluctance and anxiety to do academic presentations and respond to the questions asked by the lecturers during lectures.

“I can’t say what I want to... I feel shy because words do not come to my mind ...” (Student G)

“I’m unable to take down the notes because I can’t catch up with the lecturer...” (Student C)

The following themes were generated based on the language specific needs of the selected group of undergraduates.

I. Necessity of learning technical jargon/ vocabulary

One of the prominent needs of the participants was the requirement to improve their technical vocabulary. Moreover, since the participants are currently in their first year, they do not have much exposure to the technical jargon of their field of study.

“Learning and memorizing subject related vocabulary will be a big advantage for me...” (Student D)

II. Requirement of second language support systems

The participants emphasise the importance of having additional language support systems in their first year.

“We want additional support to improve our speaking and writing to do our academic work better...” (Student E)

III. Creating a student-centered space to improve English

The theme of granting more autonomy for students in the ESL classroom can be considered as a mandatory requirement as pointed out by the participants.

“In the classroom, we should have the opportunity to talk and use English with

mistakes, and our friends should help each other to correct.” (Student G)

Conclusion and Recommendations

Based on the findings of the study some implications can be made accordingly. The curriculum should be revised to integrate an English for specific academic purposes programme so that the undergraduates can improve both their language skills and technical vocabulary at the same time. Moreover, content-based language teaching and learning can also be introduced to improve their technical jargon. Peer collaboration, peer feedback, and student-centered language learning activities should be implemented to enhance learner autonomy. Furthermore, collaboration between those who teach the subjects and those who teach English to the students is mandatory for the successful delivery of the EMI programme. Language support systems for EMI students are crucial. Kirkpatrick (2014) indicated that all universities which insist on EMI programmes must ensure that they also provide systematic ongoing English development courses which are integral to a student’s degree” (p.7). Unless adequate language support is given, EMI alone appears to lack the ability to confer linguistic benefits” (Chapple,2015, p. 5).

References

- Chapple, J. (2015). Teaching in English is not necessarily the teaching of English. *International Education Studies*, 8(3), 1-13. <https://doi.org/10.5539/ies.v8n3p1>
- Kirkpatrick, A. (2014). The language(s) of HE: EMI and/or ELF and/or multilingualism? *The Asian Journal of Applied Linguistics*, 1(1), 4. <https://doi.org/10.1016/j.ajal.2014.03.002>
- Karakaş, A. (2017). The forgotten voices in higher education: Students’ satisfaction with English-medium instruction. *Journal of English as an International Language*, 12(1), 1-14.
- Rogier, D. (2012). *The effects of English-medium instruction on language proficiency of students enrolled in higher education in the UAE* (Doctoral dissertation). University of Exeter, UK.
- Sert, N. (2008). The language of instruction dilemma in the Turkish context. *System*, 36, 156-171. <https://doi.org/10.1016/j.system.2007.09.005>

A GENRE-BASED APPROACH TO THE USE OF MATRIMONIAL ADVERTISEMENTS IN TEACHING ENGLISH AS A SECOND LANGUAGE TO ADULT LEARNERS

K.M.I.W.S.C.H. Kulatunga¹, J.A.K.M. Jayasinghe^{2*}

¹*Department of English Language Teaching, Faculty of Arts, University of Peradeniya, Sri Lanka*

²*Department of English Language Teaching, Faculty of Arts, University of Peradeniya, Sri Lanka*

Abstract

In Sri Lanka, matrimonial advertisements can be interpreted as cultural texts, and their analyses in sociology, anthropology and cultural studies are a popular classroom-based activity. Using genre analysis, this study attempts to examine how they can become a rich resource in the ESL classroom. It proposes ways of using this genre in a university ESL classroom setting, to help beginner-level students recognize parts of speech and encourage them to produce language through short, straightforward text, while recognizing the socio-cultural implications of language use. The study reveals that because of their brevity and the use of a fixed lexicon, these texts can be productively used in a beginner's class for vocabulary building activities. This can be extended to a study of sentence structures such as the imperative and the differences in voice. It is very likely that the students will respond positively to such activities because they are using the language to engage with a reality which is familiar to them.

Keywords: *ESL Pedagogy, Cultural Texts, Genre Analysis, Matrimonial Advertisements, Vocabulary Building*

*Corresponding author: Tel.: +94 (77) 801 4348; Email: supoornak@arts.pdn.ac.lk;

Introduction

While neoliberalism and globalisation strongly impact the socio-political and economic landscape of Sri Lanka, cultural practices continue to be governed by traditional norms and mores. Marriage, among other things, is governed by such traditions, as demonstrated by the continued practice of arranged marriages, where older members of the family seek suitable spouses for their children. The methods used to engage in this practice have changed over time, and people no longer seek the services of professional matchmakers to help them find brides and grooms. Instead, they opt for quicker and more commercialized services, such as the matrimonial advertisements or simply “matrimonials” which appear on widely circulated weekend newspapers in all three languages—Sinhala, Tamil, and English—used in Sri Lanka.

V Bhatia (1993) states that “each genre is an instance of a successful achievement of a specific communicative purpose using conventionalized knowledge of linguistic and discoursal resources” (16). Sri Lankan matrimonial advertisements can be identified as a genre because it does achieve the “communicative purpose” of seeking suitable spouses by using “linguistic and discoursal resources” which are recognized and comprehended by the community, aligning with the study on Genre Analysis that study how language is used within a particular context (Hyland, 2004). However, there is little to no scholarly work which looks at matrimonial advertisements in the way that is intended in this study. This is not to say that this genre has not found its way into serious inquiry at all; for instance, most researchers/academics who do linguistics research on Sri Lankan English use matrimonials as instances which display the use of this variety of English (Gunesekera, 2005; Herat, 2001). Moreover, most of this work is limited to the identification of lexical items which are unique to Sri Lankan English and does not extend to a study along the lines of detailed genre analysis in ELT practice.

Through a close genre analysis of selected matrimonial advertisements appearing in the Sri Lankan weekend newspaper Sunday Observer, the researchers intend to unpack the social, cultural, and economic implications of this genre. With this information, the main aim of the study is to examine ways of using this genre in a university ESL classroom setting to help L2 users of beginner proficiency level to recognize parts of speech (adjectives, nominalization, passive structures) and encourage them to produce language through short, straightforward text, while also recognizing the socio-cultural implications of language use.

Material and Methods

For this study, the data was gathered from the matrimonial section of the Sunday Observer. Matrimonials in Sri Lanka appear in all three major languages (Sinhala, Tamil, and English) and the corpus of this study was compiled from the Sunday Observer issued on May 12, 2024. Thirty matrimonials (fifteen each from the Brides and Bridegrooms sections) were randomly selected for this study from this issue. The sample was limited to this number because one issue alone carries approximately 150-200 matrimonials every week and they are representative of the form and content of this genre. The genre analysis properly entailed an identification of the “obligatory and optional moves” (Bhatia, 1993) of this genre including a brief discussion on potential outliers to the patterns identified. This analysis led to a discussion on the pedagogical potential of the genre and its analysis, with specific considerations on how they can be used in the ESL classroom in a higher education setting as a means of introducing linguistic structures, and lexicon and promoting more advanced language production through the discussion of how language and culture work together.

Results and Discussion

Through a close analysis of the sample and an overview of the entire matrimonial section of the *Sunday Observer*, it was revealed that all matrimonials adopt the following obligatory moves (not in a particular order): description of the family, description of woman/man, description of the partner they seek, request for additional details, a reference number used by the newspaper. The use of language in matrimonials is spatially limited because the number of words used is determined by the price of the advertisement. So, a majority of matrimonials resort to using noun phrases, or clauses rather than complete sentences. For instance, noun phrases like “differences immaterial,” “very well-trained professional” or imperative structures like “reply with a copy of horoscope,” and “smokers need not reply” are commonly used structures in this genre.

Patterns do emerge when the descriptions used in these texts are closely observed. The following table demonstrates how these moves can be categorized, accompanied by an example for each move. While there are exceptions to this, the adjectives used to describe certain attributes of the advertisers’ son/daughter are almost identical to those used to describe the partners they seek.

Table 1:

Requirements	Examples	
	Brides	Grooms
Character	“well-mannered,” “caring”, “kind”, “pleasant”, “motherly” “loving” “charm”	“teetotaler/non-smoker,” “caring”, “well-mannered”,
Age	“young-looking”, “exceptionally young looking” (for women who are above 35), “born in the...”	The age, “born in the...” “young-looking” (men above 45-50)
Physical attributes	“fair complexion”, “slim”, “absolutely attractive”, “pretty”, “beautiful” “smart”	“handsome”, “tall”, “smart” “fit”, “slim”
Profession	Mostly the profession is indicated: teachers, lecturers, entrepreneurs, doctors “gainfully employed”	Profession indicated: “executives”, “engineer”, “doctor”, “manager”, “IT professional”, “banker” etc.
Education	“academically qualified”, “foreign educated”, “well educated”	“academically qualified”, “studied in leading schools/universities”
Finances	“assets”, usually indicates property which is inherited from family such as real estate or businesses	“assets”, usually indicates property which is inherited from family such as real estate or businesses
Caste and Ethnicity	“Bodu/Govi”, “Bodu Karawa” “B/G”, “B/S”, Vellalar Sinhala, Tamil, Moor, Malay	Bodu/Govi”, “Bodu Karawa” “B/G”, “B/S” Sinhala, Tamil, Moor, Malay
Religion	Buddhist, Catholic, Roman Catholic, Muslim, Hindu	Buddhist, Catholic, Roman Catholic, Muslim, Hindu
English proficiency	“English-speaking”, “very fluent in English”	“English-speaking”, “very fluent in English”
Horoscope	Requests for horoscopes	Requests for horoscopes
Region	Regions of the country, countries where they have migrated to such as Canada, England, Australia, USA	Regions of the country, countries where they have migrated to such as Canada, England, Australia, USA

Another identifiable linguistic feature in this particular genre is the use of lexicon which is part of Sri Lankan English. The most noticeable is the use of transliterated Sinhala/Tamil terms which indicate caste and/or religion: *Bodu* (Buddhist), *Govi* (a higher caste), *Karawa* (a lower caste), *Vellalar* (Hindu/Tamil higher caste). Further, because this genre is characterized by its “linguistic simplicity”, in some matrimonials, the advertisers simply resort to using abbreviations to indicate caste and religion (B/G for “Bodu/Govi”). This move ties this particular genre very strongly with the discourse community who uses it because it is not very likely that this lexicon is intelligible to someone who is not Sri Lankan.

Conclusion and Recommendations

The attempted genre-based approach to these texts reveals that they can become a rich resource in the ESL classroom. Because of their brevity and the use of a fixed lexicon, these texts can be productively used in a beginner's class for vocabulary-building activities. For instance, the adjectives which have been generated through the genre analysis can elicit a variety of classroom-based activities such as word games. This can be extended to a study of sentence structures such as the imperative and the differences in voice (active versus passive). It is very likely that the students, particularly in a Sri Lankan context, will respond positively to such activities because they are using the language to engage with a reality which is familiar to them.

If these texts are used in a genre-based writing syllabus, they can be used universally in most beginners' ESL classes. According to Hyland, this approach to pedagogy helps stakeholders (students, teachers, administrators) to view writing as an attempt to communicate with readers—to better understand that language patterns are used to accomplish coherent, purposeful prose. When engaging with the genre, students from any background should be able to understand that the moves in this genre are intended to find a suitable partner. In higher education institutes with mature students, this can foster a discussion on cultural diversity and how language is so inextricably bound to culture.

References

- Bhatia, V. (1993). Approach to genre analysis (Ch. 2 in *Analysing Genre: Language Use in Professional Settings*). Longman.
- Gunesequera, M. (2005). *The postcolonial identity of Sri Lankan English*. Katha Publishers.
- Herat, M. (2001). Speaking and writing in Sri Lankan English: A study of native and non-native speakers. *California Linguistic Notes*, 26, 1-14.
- Hyland, K. (2004). *Genre and second language writing*. University of Michigan Press.
- Matrimonials. (2024, May 12). *The Sunday Observer*.

AUTHENTICITY AND CRITICAL THINKING IN THE AGE OF GENERATIVE AI: AN EXPLORATION BASED ON STUDENTS IN AN ADVANCED UNDERGRADUATE READING/WRITING COURSE IN A SRI LANKAN STATE UNIVERSITY

K.M.I.W.S.C.H. Kulatunga^{1*}, G.D.U.P.K. Gamage² and S.T. Ratnayake³

^{1, 2,3}*Department of English Language Teaching, Faculty of Arts, University of Peradeniya,
Peradeniya, Sri Lanka*

Abstract

Artificial Intelligence (AI) is a rapidly developing technological phenomenon that has a pervasive impact on education. So, language teachers are faced with the conundrum of ensuring that students develop their language skills and their critical thinking skills because the authenticity of the work produced by AI is questionable. As such, this study, based on a survey conducted with a select group of Sri Lankan undergraduates following an advanced reading and writing course in English, is an exploration of the ways in which AI has influenced student writing. The quantitative data and qualitative data gathered by administering the questionnaires were analysed using Google Form summaries. It showed that AI has become a significant component of student academic writing and that it was time for teachers and administrators to consider ways in which authenticity and critical thinking as well as the development of writing/English language skills can be preserved in spite of AI and with AI as well.

Keywords: *Academia, Artificial Intelligence, Authenticity, Critical Thinking, Student Writing*

**Corresponding author: Tel.: +94 (77) 801 4348; Email: supoornak@arts.pdn.ac.lk;*

Introduction

Artificial Intelligence (AI) is a rapidly developing technological phenomenon that has a pervasive impact on all walks of human existence. Indeed, the extensive presence of Generative AI (GenAI) in education is undeniable due to the access that the general populace has to such platforms as ChatGPT and QuillBot. According to the International Business Machines Corporation (IBM), Generative AI is “deep-learning models that can generate high-quality text, images, and other content based on the data they were trained on” (our emphasis) (2023). This ability to generate text is concerning to language teachers, since now students have a tool at their fingertips to simply enter a prompt and obtain responses to various tasks, which eludes most traditional plagiarism detectors. So, language teachers are faced with the conundrum of ensuring that students develop their language skills and also their critical thinking skills because the authenticity of the work produced by AI is questionable. In fact, “AI technology has been disruptive to the ways writing is produced, taught, learned, evaluated, and edited” (Alharbi, 2023) As such, this study is an exploration of the ways in which AI has influenced student writing along with a consideration of ways in which authenticity and critical thinking as well as the development of writing/English language skills can be preserved in spite of AI and with AI as well.

Material and Methods

A survey was implemented to achieve the aforementioned objectives. The sample selected using the convenient sampling method comprised 30 undergraduates in their third year of study¹ who followed the Advanced English Reading and Writing Course in the Faculty of Arts of a Sri Lankan state university². A close observation of the first drafts submitted by the students for a take home writing assignment³ indicated that the work was not original, which prompted the teachers/researchers to investigate the real source of their responses. For the collection of data from undergraduates, a questionnaire consisting of 17 open and close ended questions including demographic factors was administered. Additionally, seven instructors who taught the course were randomly selected and given a questionnaire of 7 open ended questions. Informed consent was obtained from each respondent and the anonymity of the participants was ensured. The quantitative data and qualitative data gathered administering these questionnaires were analysed by using Google Form summaries as well as on a thematic basis respectively.

¹These students are reading for special degrees in Law, Economics, Social Work Political Science and Sinhala. The students are grouped based on their disciplines.

²This is an optional course, and the students are eligible to offer the course only if they successfully complete the Intermediate Level course.

³A Literacy Narrative writing task

Results and Discussion

As observed in the Google form summaries, all the undergraduate respondents claimed to use AI quite often, with ChatGPT being the most popular application. They further claimed that they used it for academic work such as writing assignments, getting content for assignments, preparation of notes, summarizing academic texts, and checking the accuracy of the English language in their written work in all their disciplines, including English. Once the fact that students do use AI in their discipline related written work was established, they were asked whether they considered their writing produced using GenAI to be authentic or plagiarized. Of the 30 respondents, 14 claimed that such writing was “their own”, 10 considered it be partly plagiarized and partly original and 06 believed that it was plagiarized. The majority’s belief that AI generated work (either partially or fully) is “their own work” belies a tenuous grasp of the notion of authenticity in academic work. But in response to the question about the potential issues they faced or continue to face when using AI, they cited the partial or significant inaccuracy of the generated content and the issues they have when accessing AI technology. So, the fact that some students believed that the work generated through AI was either partially or fully unoriginal and that they have identified issues in the use of AI reveal the complexity of the attitudes that students have towards AI, although they use it frequently in all aspects of their academic writing. However, interestingly, when it comes to the possibility of improving knowledge on a topic and language skills, the majority of the respondents claimed that they did observe an improvement in both aspects through the use of AI. Furthermore, most of the respondents believed that AI could be a resource to improve their English language skills, adding another layer of complexity to the students’ perception of AI and its uses in academia.

A thematic analysis of the responses of the selected instructors revealed that they had encountered the use of GenAI in their students’ work⁴. The instructors cited their familiarity with the students writing and the discrepancies they identified between the writing done in-class and the writing produced as a take home task as the ways in which they discovered that the students had used AI in their writing without acknowledgement. The

instructors unanimously expressed their concern regarding the authenticity and the hindrances to critical thinking in writing generated through AI, yet they also admitted that the use of GenAI in academia is an inescapable reality. So, as strategies to engage with the unsolicited and unacknowledged use of AI, the instructors had first had one-on-one conversations with the students about AI and the importance of authenticity and integrity in academic writing and also assigned the same writing task as an in-class activity which yielded work which was reflective of the students' authentic language competence compared to the work produced through AI. Further, 02 out of the 07 instructors had also experimented with using AI applications such as ChatGPT in the brainstorming and editing stages of the writing task which had yielded a satisfactory engagement in the writing process on the students' part.

⁴This was the first draft of the Literacy Narrative which was assigned as a take home task. The students had not revealed that they had used AI when they first submitted the drafts.

Conclusion and Recommendations

The observations made from this select sample of students show that AI, in all its forms, is here to stay. Its impact on academia is formidable and is an inescapable reality. The exploratory study, despite its limited scope, can be seen as reflective of the complexity of the perceptions that students have towards AI and the texts it generates, particularly when it comes to authenticity and its potential to improve knowledge and English language skills. However, the core commitment of academia and all its stakeholders is to ensure the authenticity of scholarship and the development of critical thinking and creativity. So, as teachers of ESL and Academic Writing, an acknowledgement of the existence and impact of AI in academia and specifically in ELT should lead to an understanding that traditional pedagogies are not fully equipped to handle this reality. An “immediate” strategy to ensure authenticity in student writing is assigning more in-class work, particularly in the drafting stages of the writing process. However, this is not a sustainable strategy in all modes of teaching/learning, viz., online instruction. Therefore, the strategic incorporation of GenAI in ELT pedagogy, particularly in the reading/writing class is suggested as a longer-term strategy to ensure the authenticity of student writing by ensuring transparency and accountability in how they produce their texts. Indeed, studies as recent as 2023 both international (Bishop, 2023; Chan, 2023; Cotton et al., 2023;) as well as local (Prasangani and Samarasinghe, 2023) have detailed the success of this approach. This should be accompanied by further research and training of all stakeholders in academia because the ultimate goal is to foster creative and thoughtful scholars able to make

authentic contributions to knowledge and the community.

References

Alharbi, Wael, (2023) AI in the Foreign Language Classroom: A Pedagogical Overview of Automated Writing Assistance Tools, Education Research International, <https://doi.org/10.1155/2023/4253331>

Bishop, L. (2023). A computer wrote this paper: What ChatGPT means for education, research, and writing. Research, and Writing (January 26, 2023). <https://dx.doi.org/10.2139/ssrn.4338981>

Chan, C. K. Y. (2023). A comprehensive AI policy education framework for university teaching and learning. International Journal of Educational Technology in Higher Education, 20(1), 1-25. <https://doi.org/10.1186/s41239-023-00408-3>

Cotton, D. R., Cotton, P. A., & Shipway, J. R. (2023). Chatting and cheating: Ensuring academic integrity in the era of ChatGPT. Innovations in Education and Teaching International, 1-12. <https://doi.org/10.1080/14703297.2023.2190148>

Samarasinghe, Kamani & Prasangani, Kariyawasam Sittarage. (2023). “Reliance on AI Tools and Fostering Creativity among Sri Lankan ESL Learners: Special Focus to ChatGPT.” Conference: International Conference on Educational Technology and Online Learning (ICETOL) 2023

CULTURAL KALEIDOSCOPE: TEACHERS' INSIGHTS ON INTEGRATING CULTURE IN ENGLISH LANGUAGE TEACHING

S.K.L.J Ramanayaka^{1*}

¹*Sri Lanka Institute of Tourism & Hotel Management, Sri Lanka (SLITHM)*

Abstract

The interplay between English language teaching and cultural integration has been discussed for decades. Initially, British culture dominated, but now a diverse tapestry of cultures enriches language teaching, enhancing intercultural communication and effective learning. Despite this, not all English as a second language (ESL) teachers recognize the value of cultural integration. This study examined the perceptions of ESL teachers on this practice. Focusing on government school teachers of grades six through nine in Galle selecting twenty teachers randomly. Data was collected via a questionnaire addressing various aspects of cultural integration in ESL classrooms, such as importance, relevant cultures, reasons, timing, methods, advantages, disadvantages, barriers, and suggestions. Findings reveal that ESL teachers understand the importance of integrating culture into language teaching and know effective methods to do so. They believed in the synergy of language and culture for successful English learning but noted barriers within the current curriculum. Suggestions of this study are crucial for future curriculum development.

Keywords: *Cultural Integration, English Language Teaching, English as A Second Language Teachers, Intercultural Communication, Perceptions*

*Corresponding author: Tel.: +94 (77) 578 7783; Email: lathisha.rama@gmail.com;

Introduction

Colonization wielded its hegemonic power through English language in non-native speaking countries, spreading its influence far and wide (Byram, and Grundy, 2003). However, this dominance was challenged by cultural studies that embraced a multicultural approach, celebrating contemporary cultures (Mao, 2009). This shift implies that learning English as a foreign or second language should integrate not just British culture, but also the unique cultures of the learners (Field, K., 2000). A child is naturally influenced by their surroundings, indicating that incorporating local cultures into foreign language teaching greatly aids in language acquisition (Tran, & Dang, 2014). This approach also fosters intercultural understanding, motivating students to learn the language. Consequently, including cultural elements in English language curricula has gained global support (Lakshmi, 2011). Despite this, some ESL teachers still overlook the importance of cultural integration, often due to a lack of resources, time, and knowledge. Thomas Scovel's findings (1998, cited in Mao, 2009) support the notion that from birth, a child is shaped by their cultural environment. He concludes that teaching culture in ESL classrooms positively influences second language acquisition (p.145). This study explores whether these aspects hold true in the Sri Lankan context by seeking the perceptions of ESL teachers in Galle town on the integration of culture in language teaching. Specifically focusing on school-level education, it addresses the following questions:

- i. Is integrating culture in teaching English important at the school level? If so, which cultures should be taught, when, how, and why?
- ii. Are there barriers to teaching culture? What can be done to further incorporate culture into the ESL curriculum of Sri Lankan schools?

The research targeted English language teachers in government schools in Galle town. Twenty teachers from grades six, seven, eight, and nine were randomly selected, with five teachers from each grade. The choice to focus on school teachers stems from the structured nature of the school curriculum, which contrasts with the more flexible, student-centered curricula of tertiary educational institutions. School teachers have limited freedom to deviate from the national curriculum, making their perspectives crucial. This study is significant as it amplifies the voices of secondary level English teachers on the integration of culture in English language teaching, a topic that has not been extensively explored in the Sri Lankan context.

Material and Methods

A questionnaire was crafted to delve into various facets of cultural integration in the ESL classroom, exploring questions like its importance, which country's culture should be highlighted, the reasons, timing, methods, benefits, drawbacks, obstacles, and additional recommendations. This was then disseminated among English language teachers in government schools in Galle town. To analyse the collected responses, a mixed-method approach was adopted. Qualitative data were subjected to thematic analysis, with coding of recurring themes such as cultural relevance, teacher challenges, and student engagement. Quantitative data, such as the frequency of specific responses or rankings, were analysed using descriptive statistics to provide a clearer picture of prevalent trends and viewpoints. This combined approach ensured a comprehensive understanding of teachers' insights on integrating culture into English language teaching.

Results and Discussion

The questionnaire results revealed unanimous agreement among participants that cultural elements should have been included in the ESL curriculum in Sri Lanka. Eleven out of 20 respondents believed that a diverse range of cultures—British, American, Sri Lankan, Australian, Canadian, and New Zealand—should have been integrated. Seven advocated for solely Sri Lankan culture, while two favoured only British culture. Most respondents emphasised including religion, customs, and lifestyle, while a few suggested incorporating ideas and information that foster mutual understanding.

Eight participants suggested that primary education was the ideal time to introduce cultural elements, as young children easily acquired languages and were enthusiastic about learning new things. Seven participants believed that age was irrelevant; emphasizing that culture was interesting and valuable to learn at any stage. Five participants recommended starting in elementary school, arguing that it was a crucial period for identity formation and value inculcation. The participants suggested various methods to introduce cultural elements into the ESL curriculum, including audio, video, articles, presentations, field trips, primary experiences, textbooks, games, dramas, role play, singing, dancing, workshops, group activities, and reading. Participants cited several advantages of incorporating culture into ESL teaching: it facilitated language acquisition, increased students' interest and familiarity with the language, aided memorization, built confidence, exposed students to diverse ideas and customs, fostered social integration, made learning relatable, encouraged interaction with other nationalities, promoted societal harmony,

and helped students compare and appreciate cultural differences. While most participants saw no disadvantages, some noted that cultural teaching might have varied by region, making it challenging to cover all related cultures.

Teachers needed thorough knowledge of these cultures to avoid miscommunication. Twelve participants mentioned difficulties in teaching cultural content from textbooks, suggesting creative and engaging methods to overcome these challenges. Ensuring accurate and appropriate materials, activating students' background knowledge, and balancing cultural representation were also recommended. Additionally, fostering students' opinions and ideas in class was crucial for effective cultural integration.

Participants recommended including more activities to enhance cultural values and urged the government to equip all schools, including rural ones, with the necessary technology. Teachers should have had updated knowledge of different cultures and make intercultural connections in their teaching, particularly between Sri Lankan culture and the target culture.

Conclusion and Recommendations

The results indicate that every government school English teacher in Galle town values the importance of culture and believes it should be woven into the curriculum. They advocate for a rich tapestry of cultural elements—British, American, Sri Lankan, Australian, Canadian, and New Zealand—covering aspects like religion, customs, and lifestyle. Various methods were proposed, with many favouring activity-based approaches. Most participants agree that cultural education should start at the primary level, the prime age for language acquisition, though some suggest beginning at the elementary level. The consensus is that early childhood is the optimal period for learning languages and their associated cultures.

The reasons for including cultural information are manifold, with the primary goals being to enhance language learning and foster multicultural understanding. Despite these advantages, outdated teacher knowledge can lead to student misunderstandings. Additionally, current textbooks lack sufficient exercises to promote cultural integration. Therefore, creative and engaging methods should be employed when utilising existing cultural content.

Almost all participants believe that integrating technology can boost cultural understanding and teaching effectiveness. Consequently, the government should equip schools with the necessary resources, and teachers should update and transfer their knowledge to students.

These findings are significant as they demonstrate that ESL teachers have a

solid grasp of the research topics and are critical of the current level and method of cultural inclusion in textbooks. Moreover, they have the potential to foster cultural cohesion through educational materials, recognizing culture as a vital component of English teaching.

References

Byram, M., & Grundy, P. (2003). *Context and culture in language teaching and learning*. Multilingual Matters.

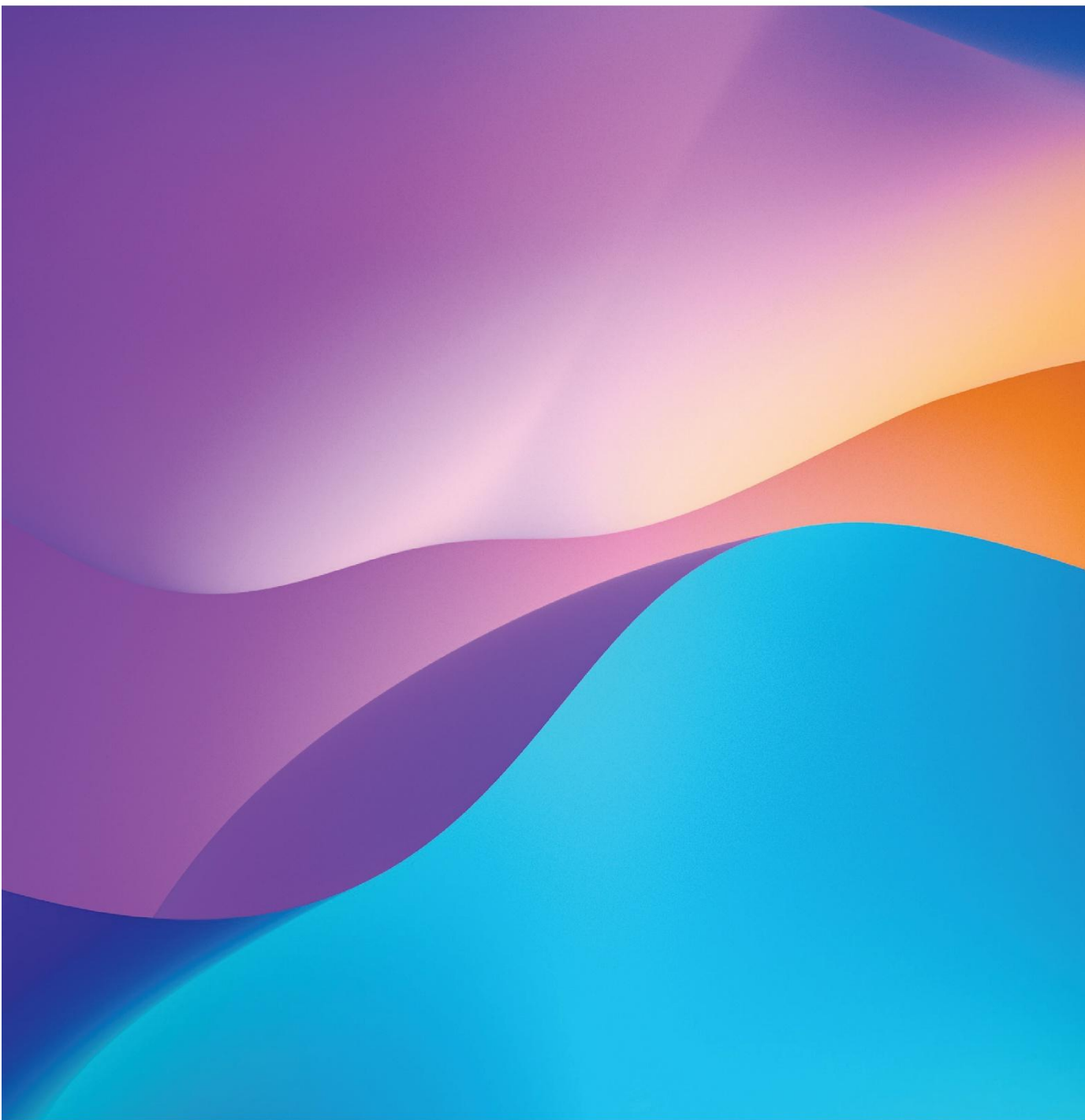
Field, K. (2000). *Issues in modern foreign language teaching*. RoutledgeFalmer.

Lakshmi, V. N. (2011). Teaching English in pluralistic societies: Language, identity and culture. *IPEDR*, 501-505.

Mao, W. (2009). Teaching culture within and beyond language. *English Language Teaching*, 2(4), 144-148.

Tran, T. Q., & Dang, H. V. (2014). Culture teaching in English language teaching: Teachers' beliefs and their classroom practices. *Global Journal of Foreign Language Teaching*, 2(2), 92-101.

ICSSL 2024



2ND INTERNATIONAL CONFERENCE ON
SOCIAL SCIENCES AND LANGUAGES